

All the R.R.s

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

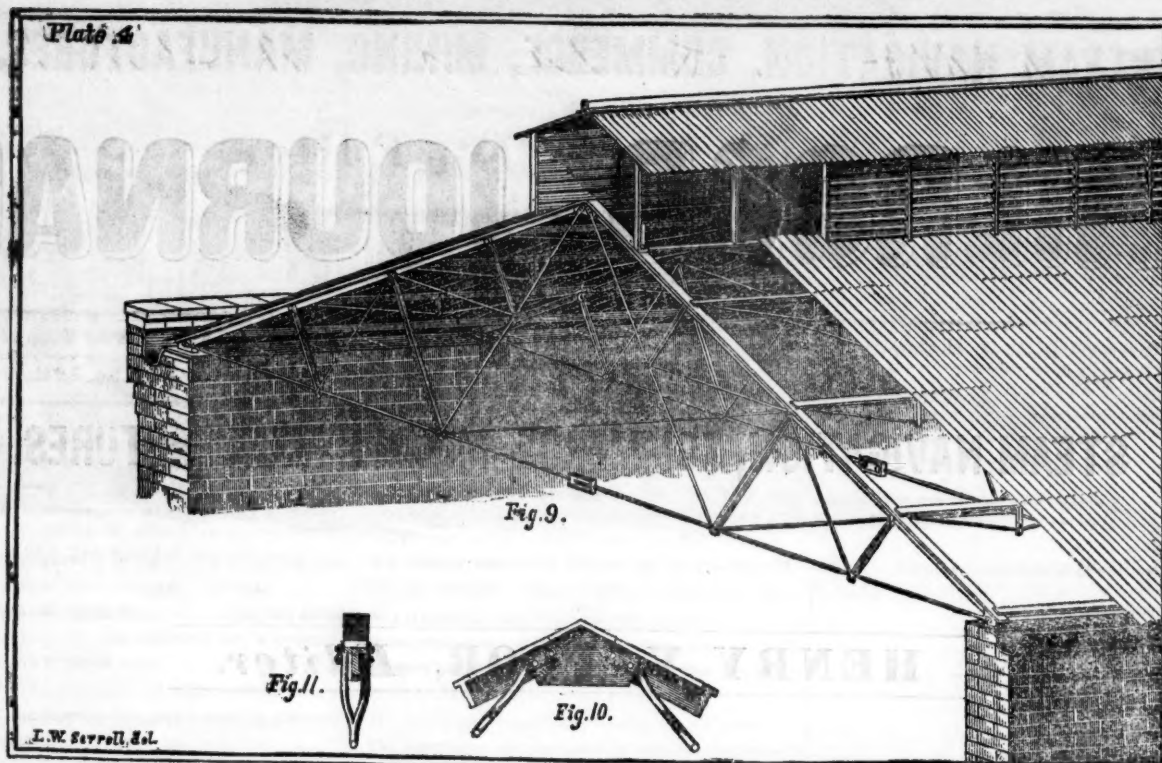
SATURDAY, APRIL 5, 1856.

Second Quarto Series, Vol. XII., No. 14.--Whole No. 1,042, Vol. XXIX.

ESTABLISHED IN 1831.

NEW-YORK:
PUBLISHED WEEKLY, BY
JOHN H. SCHULTZ & CO.
Front Room, Third Floor,
No. 9 Spruce Street.

ROOFING.



THE subscribers, manufacturers and importers of PATENT GALVANIZED TINNED IRON, respectfully invite the attention of railroad companies and others interested in the construction of Fire-proof Buildings and Roofs, to this material, which is highly recommended for strength, durability, and lightness, combined with elegance in appearance.

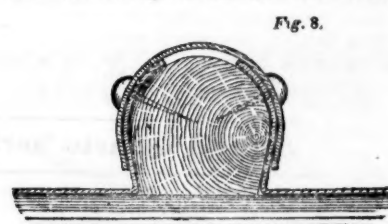
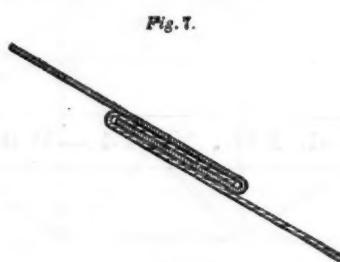
The advertisers can refer particularly to Roofs they have

erected in the New York Navy Yard, also to that of the New Jersey Railroad and Trans. Company, Jersey City. In Great Britain it is used at all the railroad depots and navy yards in enormous quantity.

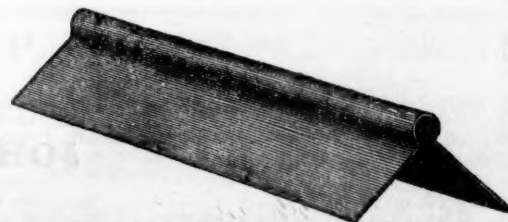
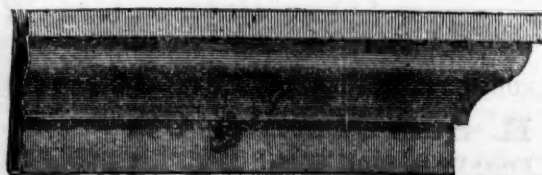
The corrugated sheets, as on the above iron framed roof, are equally suited to lay upon wood framing, either straight or curved.

Plain sheets are prepared today on boarded roofs (such as have had tin coverings) by making a flute on the side so as to fasten to a wood roll, reaching from ridge to eaves and placed between each tier of sheets, see figs. 6 and 8 below. The transverse joints are secured as shown by fig. 7.

Estimates and designs for Buildings and Roofs, &c., &c.



Galvanized Iron Cornices to any size or pattern, Ridge Caps, and Spouts.
TELEGRAPH AND FENCING WIRE, BLACK SHEET IRON SHIPS' IRON WORK,
LIGHTNING RODS. CORRUGATED. SPIKES, NAILS, &c., promptly galvanized.



MARSHALL LEFFERTS & BROTHER,
Corner of Broad and Beaver sts., NEW YORK.

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SECOND QUARTO SERIES, VOL. XII., No. 14.] SATURDAY, APRIL 5, 1856. [WHOLE No. 1,042, VOL. XXIX.

Messrs. ALGAR & STREET, No. 11 Clements Lane, Lombard Street, LONDON, are the authorised European Agents for the Journal.

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American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.
New York, Saturday, April 5, 1856.

Report of the New York and Erie Railroad.

In presenting to the stockholders of the New York and Erie railroad company the annexed detailed statement of the present condition of their important, and to the city of New York, invaluable property, I cannot refrain from congratulating them on the greatly improved condition of the company's affairs.

During the year 1854, the road was burdened with a heavy floating debt, which was incurred in the construction of the second track, and for increased equipment, and only with great difficulty, and at great sacrifices were the necessary means obtained to meet its daily maturing liabilities.

By the aid of the individual credit of the Directors, a loan, sufficient to meet the interest and other debts payable in August, was effected; but on the 1st of September, the semi-annual interest on nearly \$10,000,000 fell due. This, with the general distrust attendant upon the bankruptcies and frauds of that season, the almost universal discredit of railroad securities, the agitated and stringent state of the money market, the want of confidence in the future, and the maturing of \$2,651,000 of its funded debt within five months thereafter, brought on a crisis in the affairs of the company, which compelled a temporary resort to the credit of two gentlemen of this city, of acknowledged wealth, to save the company from dishonor. The measure, although it was regarded at the time by many as doubtful, through the liberality of some of our leading city banks, proved successful.

The negotiation of a new loan was then regard-

ed by many intelligent capitalists, if not by all, as impossible, except at ruinous rates; but on re-organizing the Board after the annual election of Directors in October, the loan of \$4,000,000 was resolved upon and obtained.

To-day, the sacrifices made by the company to meet promptly at maturity all its engagements, have been wholly repaid. The credit of the company is entirely re-established; all the indorsed acceptances have been paid, and the two chattel mortgages satisfied and discharged of record; while the new loan, negotiated by the unwearied, gratuitous exertions of the Directors, and the generous aid and confidence of our own and foreign capitalists and merchants, enabled the company to pay at maturity the entire balance of the income bonds, and to reduce the floating debt to an amount so moderate that all further sacrifices have become unnecessary.

The rate at which the new loan was negotiated was undoubtedly low, if the security it offers be alone taken into consideration; but under the then existing circumstances, and in proportion to the rates at which other unquestioned securities were selling, it was fully as high as could have been expected. The large sinking fund established by this company, although, at present, preventing cash dividends to the stockholders, notwithstanding they are earned, has been generally considered most judicious—so much so that many other companies that have since offered new loans have established sinking funds as absorbents of their funded debts. I am confident that a more profitable use cannot be made at present of a portion of the earnings of the company. The sinking fund, by its rapid absorption of the debt, must gradually enhance the market value of the shares, as well as favorably affect the future renewal of the loans as they mature; besides which, to the permanent shareholder it acts simply as a loan to himself, to be returned at an early period in stock dividends.

In consequence of the commercial crisis and the failure of the cereal crops in 1854, by which the passenger and freight traffic of the road was greatly reduced, while undue competition forced a reduction in the rates charged on the through business in about the same proportion, the gross earnings of the fiscal year have been greatly under the estimate of the Directors, and yet the net income, after paying interest on the debt and the monthly instalments to the Sinking Fund, is almost identical with the estimate. This gratifying result has been obtained notwithstanding the drawback of several severe losses by fire, amounting in the aggregate to \$72,514 89; while at the same time the commendable condition of the road and equipments has been fully maintained, and in some respects materially improved, the highest possible condition of the road bed and rolling

stock, increases the capacity of the road, renders accidents and consequent losses less frequent, and proves in the end to be true economy.

The gross earnings of the road for the year are \$5,488,993 87
Expenses of all kinds, including interest on funded and float'g debt, the rent of Union Railroad, (52-14 per cent. of gross earnings)..... \$4,655,573 50
Contributions to sinking fund..... 288,625 00
4,944,198 50

Leaving a balance to income acc't for the year..... \$544,794 87
The estimated earnings were..... 6,000,000 00
The estimated expenses, including interest on debt and the contributions to the sinking fund..... 5,459,570 00

Net revenue..... \$540,430 00
Making the actual net revenue \$4,864 87 more than estimated.

The above balance, with the contributions to the sinking fund, presents as the net earnings of the year \$833,419 87, being 8 $\frac{1}{2}$ per cent. on the capital stock.

That the traffic of the road for the present year (notwithstanding the unprecedented severity of the winter) will greatly exceed the last, is demonstrated by the result of the business of the first quarter, which exhibits the gross earnings as..... \$1,727,989 87
Against same quarter, 1854..... 1,480,782 70

Excess of 1855 over 1854..... \$247,206 98
And the net profits are \$462,797 97, being 5 $\frac{1}{2}$ per cent. upon the capital of the company.

A like increase upon the remaining nine months would make the gross receipts for the year nearly \$6,500,000. But owing to the great and prolonged embarrassments of the past inclement season, of which the history of railroads in this country presents no parallel, the receipts for the second quarter will give no increase upon the same period last year; and it is but reasonable to expect that the expenses will be increased during the same term. Should the result of the year's business not prove to be as profitable as may have been anticipated, the deficiency will probably be found in the three months comprising this quarter. It must be remembered, however, that the embarrassments have not been confined alone to this road. All other avenues of communication with the Atlantic seaboard have been equally blocked, and the extensive crops of the last year thus kept back, with an active foreign and domestic demand at reasonably high prices, will give full employment to the trains eastward bound; and the stimulated

movement of business westward, after a season of liquidation like the past, and accelerated by the almost unprecedented prosperity of the interior country, must inevitably furnish a correspondingly increased return trade. A large increase in the business and pleasure passenger traffic may also be confidently relied on during the coming season.

Amicable relations now exist between this company and competing lines. The temporary loss contingent upon the strife of last year with the most formidable rival, resulted in a better and more defined understanding of the rights of each, and must tend in the future to the advantage of both corporations, and it is hoped will be a permanent gain. The foregoing favorable auspices, taken in connection with the superior discipline, system and economy which characterize the Superintendent's department, promise at the close of the year an exhibit which cannot fail to be generally satisfactory to the stockholders, and indicate the period when it may be proper to resume the payment of regular semi-annual cash dividends, in addition to the stock dividends, from the accumulations of the sinking fund, as is hereinafter presented.

The Directors in their circular to the public in October, 1854, asking for proposals to the new loan of \$4,000,000, indicated to the stockholders the

FUTURE POLICY

of the Company as follows:

All bonds on being purchased by said trustees shall be cancelled by writing or printing on their face, "Held by the Sinking fund of the New York and Erie Railroad Company;" but that the interest warrants on said cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest, or the conversion of Convertible Bonds into stock of this Company shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease and the trust vested in said trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to this Company.

Resolved, That as often as the bonds purchased by the Sinking Fund amount to 10 per cent. on the capital stock, this company will, upon receiving due authority from the Legislature of the State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after re-imbaring the income bonds due 1st of February next, be charged to transportation expenses.

In conformity therewith, the Company will declare a dividend of 10 per cent. in stock (the law authorizing the same being first obtained) in April, 1857; and the following is offered as an approximate estimate of the amount which will be accumulated in the Sinking fund on the respective dividend days, until the debt of the Company shall be reduced, according to the terms above recited, to \$20,000,000:

SINKING FUND.

1855—Sept. 30.....	\$322,000	
1856—April 1, estim'd....	580,000	
1856—Oct. 1, estim'd....	834,000	
1857—April 1, estim'd....	1,065,000	1st dividend.
1857—Oct. 1, estim'd....	1,383,000	
1858—April 1, estim'd....	1,609,000	
1858—Oct. 1, estim'd....	1,894,000	
1859—April 1, estim'd....	2,188,000	2d dividend.
1859—Oct. 1, estim'd....	2,491,000	
1860—April 1, estim'd....	2,844,000	
1860—Oct. 1, estim'd....	3,127,000	3d dividend.
1861—April 1, estim'd....	3,470,000	
1861—Oct. 1, estim'd....	3,804,000	
1862—April 1, estim'd....	4,169,000	4th dividend.
1862—Oct. 1, estim'd....	4,525,000	
1863—April 1, estim'd....	4,906,000	5th dividend.
Funded Debt, Feb. 29, 1856.....	\$24,891,000	
Sinking Fund, April 1, 1856.....	4,906,000	

Estim'd Funded Debt, April 1, 1863, \$19,985,000

The capacity of the road for moving freights is, at present, greater than for receiving and discharging them, and in consequence of the want of suitable room for this purpose at the eastern terminus of the road, much expense and inconvenience have been experienced.

During a portion of the past season the contracted nature of those accommodations has been such as to limit the business of the road, and the present cramped and utterly insufficient depot at Jersey City, (so contracted as not to deserve the name,) with the certain prospect of a largely increased traffic in future, render it indispensably necessary that more enlarged facilities should be afforded at Jersey City and Piermont stations.

By way of explanation, I will state that the New York and Erie Railroad and its various branches, with all their extensive connections, have for their use at Jersey City but the same block of ground, 200 by 400 feet in dimensions, that was occupied by the Paterson and Hudson River Railroad, when it extended from Jersey City to Paterson—sixteen miles only. The space is barely large enough for a turning-table, and standing room for the cars, locomotives, fuel, &c., for the first-class passenger business of the Company; and yet the local freight business of the Union Road, the entire milk business of the Eastern Division, the through bonded goods, and the express parcels, are of necessity forced to take that route at serious inconvenience.

The second-class passengers and emigrants, a large portion of the express matter, and the other fast freights, which conveniently come under the same classification, are unavoidably carried via Piermont. The live stock trains run only to Bergen, three miles out of Jersey City.

The pier at Piermont extends nearly a mile into the river, with three principal tracks its whole length, and about five miles of sidings in addition; yet the area of this pier furnishes only about half the present necessary standing-room for cars—to say nothing of the extent of ground required for deposit of lumber, coal, iron, and other bulky commodities.

The construction account of this Company has but recently been closed, and it is deemed unwise now to re-open it; yet these requirements are of an imperative nature, and such as will involve an expenditure larger than can with propriety "be charged to transportation account." They are, too, of such a character that they cannot profitably be made at the present localities of these termini, even should the cost be disregarded.

The propriety of making these expenditures; the place at which they shall be made, having in view the greatest dispatch to passengers of both classes; to express and fast freight; the accommodation of shippers of property over the road; the receiving and delivery of the same in New York; economy in transportation; the greatest advantage of the Company; the general interests of this city, and that all should be duly promoted, have received the most deliberate consideration.

To this end, a few friends of the New York and Erie Railroad Company have availed themselves of a most favorable opportunity, such as might never again occur, for securing suitable and extensive grounds upon a location most fitly adapted to its present and future growing wants. The event will be regarded as the more fortunate when it is realized that the property in the immediate vicinity of New York, and especially so at Jersey City, is being daily taken up for building and manufacturing purposes, and on account of the enhanced value and extent of the ground required, any further delay would possibly have defeated the movement. The vegetable garden of to-day becomes a crowded ward of a city to-morrow—and the transition in the value of property is equally remarkable!

The property purchased, which is designed for the depot, is situated in the cove about midway between the Jersey City and Hoboken ferries, north of "Long Dock," in what was formerly known as Aharsims, now Jersey City. It embraces all the land under water east of high water mark, between Pavonia avenue and North

Fourth street, including half of those streets, and extends into the Hudson River nearly half a mile containing about seventy acres, or about eight hundred lots of land. From this tract to the present line of the Paterson and Hudson River Railroad, a distance of two miles, a continuous right of way is secured, excepting two lots, each 25 by 100 feet, in Jersey City, and two other small lots in Hudson City, of comparatively little value. The whole purchase embraces about 212 acres, or 2,515 of lots of land. The present value largely exceeds the cost, the principal purchases having been made before the object in view became generally known. The great benefits to be derived from the rise in the value of this property, attendant upon the completion of so important a work, it is intended shall inure solely to the New York and Erie Railroad Company.

Accordingly, two charters, liberal in their character, have been granted by the Legislature of New Jersey, at its late session, conferring all the necessary powers and grants for the purposes required.

The first is an "Act to authorize the New York and Erie Railroad Company to purchase and hold lands, and to complete and finish the railroad of the Paterson and Hudson River Railroad Company. The second is an act incorporating the 'Long Dock Company,' with power 'to construct a railroad to connect with any other Railroad authorized or constructed by law;' to purchase and hold lands, to sell the same; and to make all the improvements which may be necessary for a railroad depot, with wharves, slips and storehouses. This act also confers ferry privileges.

It will be borne in mind that the New York and Erie Railroad Company are operating the Paterson and Hudson River Railroad under a perpetual lease. By the provisions of the first of the legislative acts above referred to, the New York and Erie Railroad Company may purchase the lands and improvements of the "Long Dock Company" at such time as it may be deemed advisable to do so; but it is designed at present to lease the same. And by an arrangement made with the association formed under the second act, the requisite accommodations will be furnished without taxing this Company with the onerous responsibility of providing the necessary capital.

The proposed terminus in Jersey City will not only supply the conveniences desirable at the principal passenger station of a great railway, but will also furnish the requisite area for sheds, and standing tracks for the required number of freight cars, so arranged as to render the transfer of any quantity of goods systematic, expeditious and economical.

It is not, however, the policy of this company to abandon the Piermont terminus, as that will undoubtedly be required as a depot for a large portion of the freight traffic of the road, and the immense quantities of lumber, coal, iron and other heavy and bulky commodities will be carried to and from that point as heretofore.

Consequent, and depending upon the improvements at Jersey City, arrangements are now about to be made with a single company for the transportation over the road of 300,000 tons of coal annually, to be delivered at Piermont. This is in addition to the present business of the road; and other like arrangements, contingent upon enlarged facilities, are also in prospect.

The character of the business which will be done at Piermont will be changed, but the extent of the same will not be diminished, nor the importance of the place in the slightest degree impaired.

The expense of transportation between the proposed new terminus and the Suffern Junction will not vary materially from that between the latter point and Piermont: while the cost of maintaining the ferry between New York and Piermont will be in a measure dispensed with.

With a depot so complete, and upon a scale commensurate with the magnitude of the business of the road—located, as it will be, in the heart of the business theater of the great commercial center of this country—it may be truly regarded as the crowning stone in the completion of this gigantic

work, and will forever secure to the city of New York vast advantages, and to this company the unrivaled control of a large proportion of the business of the mighty West.

In conclusion, I take pleasure in availing myself of this opportunity to express my sense of the great obligation of the stockholders to the Directors of this Company, who have, with a disinterested devotion to its interests, from time to time, during the perilous vicissitudes which have threatened its existence, most nobly risked their own credit and fortunes in sustaining the honor and solvency of the Company. The expression will apply as well to the Directors who were co-laborers in the Company's service in its earlier struggles, as to those of more recent date. But signally marked was the example of Daniel Drew, Esq., the present Treasurer, during the crisis which has but recently passed, in most generously lending his name, as indorser for the Company, for a very large amount. Mr. Drew's compensation is in the satisfaction of having aided the Company in the time of its greatest need, and when, but for his assistance, direful consequences might have ensued. Of like value was the clear conception and untiring exertion of Charles Moran, Esq., in devising, and with the aid of his co-directors, in negotiating the last loan of \$4,000,000.

Now, the New York and Erie Railroad Company, with good management, in conformity with the wise policy recommended by the Investigating Committee, in their able Report to the Directors last year, which, as far as possible, has been adopted, is beyond any such crisis in future as those through which it has passed.

It will soon become a dividend-paying, as it is now a dividend-earning institution.

The subjoined elaborate report of D. C. McCallum, Esq., the General Superintendent, embodies a very full and intelligent *expose* of the internal organization and working of the road, and will be read not only by the stockholders of this company, but by railroad men generally, with particular interest. In addition to the detailed account of the general division of the road, of the responsibility and duties of the superintending officers, of the operations and benefit of the telegraph, of the cost of transportation, of the expenditures in construction for the past, and estimates for the present year, it defends the broad gauge adopted by this company, showing its superiority over a narrow gauge, especially in its adaptation to a heavy freighting business, both as it regards economy and capacity, and demonstrates the position by theory and experiment.

The lateness in the season when the full returns of the year were made, and the time required in carefully arranging such voluminous statistical information, together with the demand of other imperative duties upon the General Superintendent's attention, have necessarily protracted the issuing of his report; but I believe its lucid and important character will fully compensate for any impatience the delay may have occasioned. All of which I have the honor to submit.

HOMER RAMDELL, President.

Office N. Y. and Erie R. R. Co.,
New York, March 25, 1856.

Earnings and Expenses for Year ending September 30, 1855.

Total earnings.....	\$5,488,993 87
Trans. expenses, 47- 81-100 per ct.....	\$2,625,744 87
Rent of Union R. R..	84,733 33
Hire of cars.....	6,659 47
Taxes.....	54,583 05
Steamer expense account.....	3,146 23
Difference between cost and net proceeds of sale of old iron.....	5,185 58
Difference between cost and net proceeds of sale of engine and car.....	725 00
Loss by fire, barge...	8,582 79

Loss by fire at Jersey City.....	36,651 69
Loss by fire at Port Jervis.....	22,868 20
Loss by fire, Lakawaxen bridge.....	18,000 00

Total expenditures, [52.14-100 per ct.].....	\$2,861,875 21
Net earnings, after deduction of all expenditures, except new addit'ns to road and machinery.....	\$2,627,118 16
Interest on funded debt.....	\$1,664,889 87
Interest on floating debt.....	128,808 42
	1,792,698 29
Net earnings—equal to 8½ per cent. on \$10,000,000 stock.....	833,419 87
Which has been expended as follows:	
Outlays for new machinery, &c., [14 old locomotives] under old contracts, and for old claims belonging to construction acc't.....	\$245,714 11
Sinking fund [\$322,000 b'ds, 1875].	288,625 00
Floating debt paid.....	299,080 76

Total..... \$833,419 87
Comparative Statement of Earnings, etc.—1847, to Sept. 30, 1855.

Year.	Earnings.	Expenses.*	cent.	E's per mile	Exp's per mile
1847.	\$254,119.08	\$172,970.68	67.6	\$1.50	\$1.09
1848.	310,913.25	195,508.49	62.5	1.53	.96
1849.	310,148.62	508,926.21	62.8	1.28	.79
1850.	1,189,550.61	623,948.06	54.8	1.62	.89
1851.	2,359,870.70	1,277,680.49	54.1	1.62	.88
1852.	3,537,766.53	1,871,167.10	52.6	1.48	.78
1853.	4,318,962.36	2,518,781.68	58.3	1.52	.89
1854.	5,359,958.63	3,007,516.54	54.6	1.81	1.01
1855.	5,488,993.87	2,861,885.21	52.1	1.72	.89

* Includes all expenses—rent of Union Railroad, loss by steamers, by fire, &c.

Statement of Liabilities and Assets for Years ending Sept. 30, 1854-55.

	1854.	1855.
Liabilities.		
Capital stock issued....	\$10,023,958	\$10,023,958
Funded debt.....	22,641,000	24,891,000
Floating debt.....	2,435,609	1,211,769
Due income acc't.....		803,482
Total.....	\$35,150,628	\$36,930,209
Assets.		
Construction.....	\$33,439,481	\$33,742,317
Union Railroad Improvement.....	433,530	425,936
Cash and cash items.....	266,370	180,758
Materials.....	521,310	504,655
Fuel.....	185,896	497,115
Other assets.....	274,152	491,427
Disc't on bonds, 1875..		765,999
Sinking fund.....		322,000
Balance income acc't..	29,937	
Total.....	\$35,150,628	\$36,930,200

Delaware, Lackawanna and Western Railroad.

The third annual report of this company, being for the year ending 31st December last, has just been published. The present is a document of 86 pages, and contains, in addition to the ordinary matter, a valuable sketch of the company's history, with statements from all their agents, as to the progress made and business done, during the past year. The entire line to be operated by the company is divided into four divisions—the Western, Northern, Southern and Eastern. The first of these consists of the Cayuga and Susquehanna road, 34½ miles long, which was purchased in 1850, by the individual stockholders in the D., L. and W.

Co. This affords a valuable outlet, in connection with Cayuga Lake. It was at one time designed to run the Northern division from Scranton to Oswego, forming a continuous line with this road, but by a contract entered into with the Erie Company, in 1851, this plan was for the time abandoned, and Great Bend made the point of terminus for the new line. The Northern division extends from Scranton to this point. A railroad on this route was chartered as early as 1832, and revived in by the present parties in 1846, under the name of "The Legget's Gap Railroad." In 1849, the necessary surveys were made, and operations commenced in the following year. In October, 1851, it was opened to the junction with the Erie Railroad. During the same year, the Company's name was changed to "The Lackawanna and Western Railroad Company."

The Southern division extends from Scranton to the Delaware river, at the Water Gap. A charter for the construction of this part of the road had been obtained in 1849, by "The Delaware and Cobb's Gap Railroad Company." This corporation organized in 1850, and work was begun in the early part of 1853. In March of that year, in consequence of agreements entered into, an act was passed by the Legislature, authorizing a consolidation of the two companies, under the name which they now bear.

The Eastern division consists of the New Jersey Central and Warren Railroads—the latter at present nearly completed. The cost of this connecting link has been principally met by the other two companies. The charter was obtained in 1851. Its length is 18 miles. When finished, it will be leased to the D., L. and W. Co., according to an agreement entered into between the three corporations. It was also agreed with the Central Company that, to accommodate the broad-gauge cars, they should lay down an extra rail on their road; and provide a second track having the same gauge, whenever the freight furnished by the D., L. & W. road should am't to 400,000 tons per annum.

An effort has been made to form a direct connection with Philadelphia; and though not yet successful, it is hoped that ere long the Belvidere Delaware road, already opened to Belvidere, will be extended four miles farther, so as to form a junction with the other line.

"Such were the various steps, involving in their adjustment and execution much perplexity and effort, by which our enterprise has advanced, and, from small beginnings, is now taking its legitimate place among the important undertakings of our times. These embarrassments were overcome, and the results now attained have been reached only by unceasing watchfulness, and by a liberality of views and of investment on the part of our Stockholders, worthy alike of them and of the magnitude of the objects they were eventually to secure."

Attention is directed to the other connections either completed or in progress. By one of these, the Lackawanna and Bloomsburgh, of which about 20 miles are nearly completed, communication will be opened with the Southwest and West. On account of the importance of this tributary to the Company, they have furnished a portion of the means requisite for its construction. To the North and Northwest, the Oswego, Binghamton and New York, and the Lake Ontario, Auburn and New York, besides the Great Erie line, will afford an extensive outlet for coal. It is believed

the Binghamton and Oswego will be completed through to Lake Ontario at an early day. The Auburn line also will shortly be commenced with favorable prospects. The Erie line furnishes a large and steadily increasing demand for Scranton coal.

The total expenditures on construction for the year were \$1,882,851, of which were expended—on the Northern Division, \$80,188; on the Southern, \$1,453,129; on the Eastern, \$14,455; on the Western, \$7,785; and for general purposes, \$826,844.

In carrying on operations on the Southern Division, serious difficulties have had to be contended against. Owing to the severity of the season and other causes, the contractors, in several instances, not only abandoned their contracts, but proceeded to armed resistance against the company, unless the latter would make advances up to a certain point. At first the movement was sympathized with by residents on the line, but as soon as the facts in the case were properly understood, all joined in protecting the company's rights. The whole matter has since been adjusted. A considerable portion of this Division has been graded for a second track, and 1500 tons of rails purchased for that purpose. This will be immediately commenced, and pushed forward as rapidly as their means will permit.

On the Eastern Division, (N. J. Central,) the sum of \$14,454 has been expended in building piers and trestlings for loading and unloading coal at Elizabethport. The depot grounds have not yet been paid for, owing to a delay in perfecting the titles. The laying of the third rail is nearly completed. The construction account for the single track on the Northern Division can soon be closed. A new Union Station House at Great Bend is wanted, and will soon be commenced. A lateral road through Keyser's Valley, about 2½ miles, has been resolved upon. This will open up some very valuable coal estates. On the Cayuga Division, little additional improvement is required.

Under the head of Coal Department, the Company have expended, during the year, in opening mines and erecting working fixtures, \$90,451. They had reserved one-third the capacity of the road for their own business proper, but owing to the financial embarrassments of the year, the remaining two-thirds could not be engaged by other shippers of coal; and consequently they were obliged to increase their own mining operations. The amount of coal forwarded to market was less than estimated; but this is accounted for by the delay in getting the Southern Division opened. The total sales were 160,714 tons, producing \$608,990. The sum of \$3,304 has been received for rents. Value of coal on hand, 31st December, \$127,906. The expense of mining, transporting, repairs, &c., was \$547,369. Net revenue for coal, \$167,105. As to the quality of their coal, the Report says:—

"The Managers are happy to state that they are continually receiving the most gratifying testimonials to the excellent quality of our 'Scranton Coal,' and the superior manner in which it is prepared for use. To these they may add the personal knowledge of the President and several members of the Board itself, from trials made by them of coal received via Binghamton and the Chenango Canal. We cannot doubt that upon the completion of the Road, and the introduction of the coal into the city of New York and other Eastern markets, it will at once take high rank, as among the most desirable."

The earnings for 1855, in addition to the profits on coal, were—

Passengers.....	\$64,586
Freight.....	423,626
Mails.....	8,688
Use of locomotives.....	21,115
" coal cars.....	6,262
Rents and storage.....	785
Drawback rec'd from N. Y. & E. R. R. Co.	8,899

Total.....	\$528,911
Trans. expenses.....	269,248

	\$259,663
Less transfer to N. Y. & E. Co.—old disputed acc't.....	405

Net income.....\$259,263

Of this, the sum of \$61,893 has been set apart to Renewal Fund. From the remainder, the usual semi-annual dividend of three per cent. has been declared.

As already stated, the Cayuga Division belongs to the individual stockholders of the company, but under another organization. It was found, however, that the arrangement did not work satisfactorily; and accordingly in 1855, the necessary legislation having been procured, the line was leased by the D., L., and W. Co. at seven per cent. per annum, on a cost of \$1,000,000, the rent being made payable half yearly. The Cayuga and Susquehanna Co. have, by the contract, conferred the right to mine coal on their lands near Scranton free of charge. They are also obligated to extend their road, when required, from Oswego to the Pennsylvania State line. Should circumstances ever call for such, an independent line can thus be constructed from Scranton to Ithaca.

The business of the Cayuga Division last year was.....\$135,554
Expenses of operating.....74,036

Net revenue.....\$61,518

The Managers continue to make monthly payments in cash; and hence, in spite of the embarrassments of the year, the company's credit has remained unimpaired.

At the annual meeting in January, the issue of \$1,500,000 of "Eastern Extension Bonds" was authorized. Of these, \$900,000 were mostly taken by the stockholders *pro rata*. The remaining \$600,000 were offered for sale in June last, and disposed of at an average of 92½ per cent. The discount on the entire issue was only \$225,128, and of this much the greater part went into the stockholders' own pockets. The report proceeds—

"It was thought that the proceeds of the above bonds, with such temporary loans as would be readily procurable, would be sufficient for all the wants of the company, until the entire road should be opened for business. It was also hoped that the capital stock would be available to meet the floating debt that might then exist, and to complete the road; but if from any cause this result should not be realized, resort might then be had to a new issue of bonds for that purpose. In consequence, however, of the delay in opening the Southern Division, and of some increase of expense incurred in the work, the amount of the temporary loans aforesaid has been larger than was expected. To meet, then, the wants of the company, application has been made for the requisite legislative authority to execute a second mortgage on the road for \$2,600,000, to secure a new issue of bonds of that amount; making with the previous issues an aggregate of \$5,000,000.—Meanwhile, in anticipation of such authority, and

for immediate use, the Board have resolved to issue \$1,200,000 of the \$2,600,000 in the shape of seven per cent. Convertible Income Bonds, having twenty years to run; designing the latter to be exchanged for the Second Mortgage Bonds as soon as these shall be made ready.

By a circular of the Treasurer, dated December 29th, these Income Bonds were offered to the stockholders, *pro rata*, according to the amount of stock held by them on the 1st of January. In consequence of the stringency of the money market, this offer was made at a low rate, and the time within which acceptance was to be signified, was limited to the 10th of the same month. Only a portion of the amount having been taken, the offer, by vote of the stockholders, at their annual meeting, was again opened for one day, and an additional amount subscribed for. The condition of the money market, subsequently, becoming more favorable, the Board resolved to advance the price of the remaining bonds."

The report states that, in order to encourage mining operations, the Managers offered either to let shippers provide their own cars, or that the company should purchase for them the coal on the ground. Of the two proposals, the latter is generally accepted. Contracts have been made with various parties for coal, deliverable through a series of years, to an amount in the aggregate of about four million tons.

The company's prospects are considered to be most encouraging. The supply of coal is inexhaustible. It is believed that this can be furnished in New York and other Eastern markets at a less cost than from any other source. They will now be able to transport eastward and westward more than 1,500,000 tons per annum. Their means are also ample for all necessary purposes.

INCOME ACCOUNT FOR 1855.

Balance on hand from 1854.....	\$105,381
Net revenue for coal for 1855.....	167,105
" transportation.....	269,263
" machine shop—1854 and 1855.....	7,816

Total.....\$539,565

Interest on \$900,000 bonds.....	\$63,000
" \$1,500,000 ".....	69,875
" Stock.....	180,723
" Floating debt.....	41,125
Rent of C. & S. R. R.....	70,000
Renewal fund.....	61,893
Coal dep't fund.....	28,977
G. W. Scranton, old oil acc't....	330
	515,923

Leaving balance on hand.....\$23,642

GENERAL ACCOUNT.

Construction and equipment of road....	\$6,022,667
Coal lands and mining improvements..	332,513
Materials on hand.....	89,758
Coal on hand.....	128,641
Real estate in New York.....	24,181
Stock in Warren Railroad.....	155,950
Stock in Lackawanna and Bl'msburg Railroad.....	125,000
Bills and acc'ts receivable.....	287,076
Cash on hand.....	41,471

	\$7,207,257
Capital stock paid in.....	\$3,051,622
Mortgage bonds of 1871.....	900,000
Eastern Extension bonds of 1875.....	1,500,000
Interest due on bonds.....	59,267
Interest due on stock.....	96,614
Bills and acc'ts payable.....	1,392,304
Personal property received from C. and S. Railroad Co.....	92,938
Renewal fund—appropriations to credit of..	61,893
Coal department fund.....	28,977
Inc'me acc't balance on hand.....	23,642

\$7,207,257

The principal officers for 1856 are—George D. Phelps, President; Drake Mills, Vice President; W. E. Warren, Treasurer; Andrew J. Odell, Secretary; James Archibald, General Agent; E. Mc Neil, Chief Engineer; E. H. Dotterer, Superintendent of Northern Division; and W. R. Humphrey, of Cayuga Division. The Directors are—Messrs. Drake Mills, John J. Phelps, Wm. E. Dodge, Geo. Bulkley, John J. Blair, Geo. W. Scranton, Roswell Sprague, Moses Taylor, Henry Young, Saml. Willets, Wm. E. Warren, Thomas McElrath, Saml. L. Mitchell, and Rufus R. Graves. Principal office, 49 Wall-st., N. Y.

Railroad Earnings.

CLEVELAND, COLUMBUS, AND CINCINNATI RAILROAD.

The business of the Cleveland, Columbus and Cincinnati Railroad for the first 11 months of 1855, was—

Passengers	\$463,005 91
Freight	651,807 21
Express, mail, &c	51,780 18

Total	\$1,166,593 30
December, estimated	115,000 00

Total for the year 1855	\$1,291,593 30
Expenses of operating and repairs, damages, &c	520,036 05

Net earnings for 12 months	\$761,556 65
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INDIANAPOLIS & CINCINNATI RAILROAD.

The receipts of this road for the last three months, as compared with the two previous years were—

	1853-4.	1854-5.	1855-6.
December	\$26,081	\$32,493	\$48,652
January	12,284	28,505	37,500
February	21,598	24,202	33,000
	\$59,963	\$85,200	\$119,152

showing about 40 per cent. for the three months over the corresponding term of last year. The recent opening of the Terre Haute and Alton railroad is beginning to add to the traffic on this line, and an early addition to the rolling stock of the company is now necessary to accommodate the business.

ILLINOIS CENTRAL RAILROAD.

The receipts of the Illinois Central road for February, were considerably larger than the estimate made early in the month:

Passengers	\$48,301
Freight	53,880
Received from other roads	7,213
Mails and expresses	4,511

Total	\$118,907
February, 1855	59,324

Increase	\$59,588
January, 1856	134,044
January, 1855	57,098

Increase	\$76,965
Increase in two months	136,539

BALTIMORE AND OHIO RAILROAD.

The revenue of the Baltimore and Ohio Railroad for February was as follows:

	Main Stem.	Washington Branch.	Total for both roads.
For pass'grs.	\$31,318 70	\$23,233 01	\$54,551 71
For freight	146,806 56	10,155 49	156,962 05

Total	\$178,125 26	\$33,388 50	\$211,513 76
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These figures, compared with the corresponding month of last year, exhibit a falling off of \$7,316,

81 in the receipts of the Main Stem, but an increase of \$1,927.04 on those of the Washington Branch—showing an aggregate decrease of \$5,389.27 for the past month.

The earnings of the Hudson River road for March have been \$241,131, against \$167,079 for March, 1855. Increase, \$74,051.

Bellefontaine and Indiana Railroads.

According to the last report of this company, their receipts for the year ending 31st December, 1855, were—

Passengers	\$123,060
Freights	150,813
Mails, &c	24,420

Total

—an increase of \$60,283 over the previous twelve months. The ordinary running expenses amounted to \$157,470, or nearly 53 per cent., to which are to be added \$83,058 for interest, and \$8,258 for taxes; leaving as net gains \$49,237.

Two causes have contributed to increase the proportion of working expenses to gross receipts,—1st, the comparatively small amount of the latter; and 2nd, the want of harmony between the eastern and western connections, compelling the company to perform a much larger amount of passenger work than otherwise would have been necessary. It is expected that this difficulty will shortly be removed. The working expenses would not have been materially increased by the addition of one-third or even one-half more business. Estimating for 1856 only the same rate of increase upon last year's business, as it showed over 1854 (25½ per cent.), the gross receipts will amount to \$373,862, giving as net earnings \$103,304, or five per cent. on the stock. From present indications it is believed that this estimate will be largely exceeded; but the Board wish to put the figures at the safest mark.

The bonded debt of the company is \$1,214,500; and the floating debt, \$35,000. Adding \$1,181,635, capital stock paid in, makes their total liabilities \$3,131,135. Of the Real Estate bonds (\$200,000 at first) \$25,000 have been bought in. The estate will prove ample for the remainder. The total bonded debt is now \$8,903 per mile, which is less, it is believed, than on any other Western railroad. The floating debt all matures in the past and present months. The road has cost in all \$2,835,835, or \$24,382 per mile—a reasonable sum, considering the character of the work, and the amount of equipment on hand.

An issue of \$400,000 second mortgage bonds was prepared, during the year. Of this amount, \$150,000 were appropriated to payment of the floating debt and completion of ballasting, and \$49,000 sold. With the proceeds of the remainder it is expected that the construction account may be closed. The work of ballasting has been steadily continued, about 23 miles only remaining to be done. This will be finished early in the season. An engine house, the joint property of this and the Ind., Pitts. & Clev. Company has been put up at Union. At other points various improvements have been made. The rails are wearing well, and are generally in good condition. The opening of the Ohio and Mississippi railroad, from St. Louis to Vincennes, completing a direct through route between St. Louis and Cleveland, will prove highly advantageous. Difficulties have prevented

close connections being formed by this route, so far; but it is expected that these will be obviated on the return of Spring. The road will then assume its true position as an important link in the natural line between the Atlantic and the Mississippi.

The completion of the Terre Haute and Alton road will also furnish a connection with St. Louis, and throw a valuable local business on the line. By way of the Illinois Central or the Chicago Branch, a connection is also formed with the Great Western line running to Springfield and Naples on the Illinois river. The Evansville and Crawfordsville will also be a valuable feeder. It will be remembered that all these works are as yet new, and comparatively unproductive; also that last year they suffered in common from the short crops of 1854.

There is a strong probability of the completion of that portion of the Dayton and Michigan road, between Piqua and Sidney at an early day. The Mississinawa Valley road is also making steady progress; and it is expected that 52 miles of it, from Union to Marion, can be made ready for the superstructure this season.

The local business of the road has manifestly improved.

About one-third of the whole freight receipts arose from the transportation of live stock.

The freight business has suffered serious interruption, on account of various connecting lines being choked up with snow.

Mr. Godwin, in July last, resigned the Presidency of the company, and was succeeded by Mr. Brough, the present incumbent. Mr. John Canby was also, at the same time, appointed Superintendent.

GENERAL ACCOUNT.

	DR.
To 7 per cent. First Mortgage Bonds, outstanding	\$791,000 00
To 7 per cent. Second Mortgage Bonds, outstanding	49,000 00
To 7 per cent. Real Estate Bonds, outstanding	175,000 00
To 7 per cent. Income Bonds, outstanding	199,500 00
Funded Debt	\$1,214,500 00
Capital Stock	1,881,635 00
Bills and Accounts Payable	\$144,292 33
Less Amount of Bills and Accounts Receivable	115,444 16
	28,848 17
Unpaid Dividends	980 62
Balance of Transportation Account	10,912 04
	\$3,136,875 83

CR.

By Construction and Equipment of Road, Buildings and Telegraph Line	\$2,852,652 78
Unsold Real Estate Mortgaged to secure Real Estate Bonds; original cost	\$143,564 04
Notes, Mortgages and Cash in hands of Trustee	45,000 00
	188,564 04
Unincumbered Real Estate, unsold	39,455 85
One Marion County Bond	1,000 00
200 shares Col. Piqua & Ind. R. R. Stock, at par	10,000 00
Materials and supplies on hand	27,348 82
Cash on hand	17,854 34
	\$3,136,875 83

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.	NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.
Atlantic & St. Lawrence.	149	1,538,100	2,978,700	6,019,929	470,647	6	68		Brunswick and Florida, Ga.	80	300,000	200,000	550,000	In progr.			
Androsog. & Kennebec.	55	642,343	1,473,080	2,245,020	190,605	90,797	none	18	South Western.	92	1,047,486	465,500	1,624,920	253,306	141,168	8	
Androsog. & Kennebec.	20	91,192	232,193	343,317	29,399	12,907	none	20	Tennessee and Alabama.	30	246,486		679,808	In progr.			
Androsog. & Kennebec.	56	1,114,725	1,661,236	2,470,600	259,380	124,038	6	87	Tennessee and Mississippi.	288	1,703,881	958,275	3,663,362	176,484	102,016		
Port. Saco. & Portland.	61	1,807,000	119,237	1,486,347	238,284	120,884	2		Memphis and Charleston.	153	2,608,555	1,802,921	4,536,412	199,932	109,236		
Boston, Concord & Montreal.	90	1,808,093	1,059,512	2,771,310	380,221	143,565	2		Mobile and Ohio.	183	64,584	none	628,303	In progr.			
Cheshire.	58	2,085,928	899,313	1,412,576	329,744	158,632	84 1/2		Miss. Central.	55	2,930,425	671,646	2,657,668	In progr.			
Concord.	36	1,188,000	none	3,016,633	370,529	138,299	2 1/2	41	N.O., Opelousas & G.W.	111	1,000,000	1,500,000	2,500,000	In progr.			
Northern, N. H.	82	2,768,400	787,608	1,780,062	182,687	55,173	none		East Tennessee and Ga.	161	625,425	58,693	1,033,781	In progr.			
Cowd. & Passumps. Riv.	61	1,048,146	787,608	1,780,062	182,687	55,173	none		Nash. and Chattanooga.	93	431,091	159,299	635,368	90,930	84,864		
Rutland & Burlington.	120	2,335,376	2,662,396	5,378,428	820,119	214,793	none		Ovington & Lexington.	29	431,091	159,299	635,368	90,930	84,864		
Vermont Central.	117	5,000,000	3,650,236	8,463,366	490,754	140,377	6	65	Lexington & Big Sandy.	65	540,117	61,525	470,483	In progr.			
Boston and Lowell.	27	1,830,000	325,636	2,188,595	384,971	158,632	8 1/2		Louisville and Frankfort.	65	698,236	669,061	1,549,566	244,014	98,902	6	
Boston and Maine.	38	4,071,974	150,000	4,179,635	854,426	339,060	6	52 1/2	Atlantic & Gt. Western.	254	866,939	77,294	613,231	In progr.			
Boston and N.Y. Central.	74	2,240,300	1,618,671	3,463,181	558,071	219,689	none	64 1/2	Bellevue and Ind.	118	1,881,598	1,200,812	2,806,821	238,010	114,592	none	
Boston and Worcester.	68	4,600,000	658,428	4,866,428	119,221	65,527	3	29 1/2	Chic., Col. and Cin.	141	4,473,721	374,127	4,648,138	1,162,601	667,006	9	102
Cape Cod.	47	681,680	280,598	997,252	119,221	65,527	3	29 1/2	Clev., Zanesv., and Cin.	87	2,675,425	2,659,301	5,124,629	736,272	396,086	10	80 1/2
Connecticut River.	52	1,601,110	273,241	1,802,244	191,877	85,877	6 1/2		Clev. and Mahoning.	103	2,675,425	2,659,301	5,124,629	736,272	396,086	10	80 1/2
Eastern, Mass.	60	2,688,400	2,947,737	4,621,016	191,877	85,877	6 1/2		Clev. and Pittsburg.	133	2,675,425	2,659,301	5,124,629	736,272	396,086	10	80 1/2
Fitchburg.	67	3,540,000	154,700	3,765,998	191,877	85,877	6 1/2		Cin., Hamilt. & Dayton.	60	2,100,000	1,464,364	2,961,978	483,620			
Nashua and Lowell.	14	600,000	10,000	664,003	191,877	85,877	6 1/2		Chic., Wm. & Zanesv.	131	1,120,450	1,181,265	2,326,450	In progr.			
N. Bedford and Taunton.	21	600,000	none	633,963	191,877	85,877	6 1/2		Columbus and Xenia.	55	1,484,550	149,000	1,481,733	356,361	187,518	10	86
Old Colly and Fall River.	57	3,015,100	292,650	3,302,949	191,877	85,877	6 1/2		Dayton, Xen. & Belpre.	63	437,888	422,658	860,496	In progr.			
Vermont and Mass.	77	2,232,541	1,033,670	3,269,727	191,877	85,877	6 1/2		Dayton and Michigan.	140	1,076,602	393,011	1,185,826	In progr.			
Western, Mass.	155	5,966,420	10,495,905	1,669,673	191,877	85,877	6 1/2		Dayton and Western.	35	310,000	500,000	733,769	In progr.			
Worcester and Nashua.	46	1,141,000	205,565	1,346,565	191,877	85,877	6 1/2		Easton and Hamilton.	42	448,411	835,994	1,345,673	113,869	53,256		
Providence and Worcester.	43	1,610,020	338,461	1,808,696	191,877	85,877	6 1/2		Little Miami.	65	2,963,921	1,171,785	3,648,172	681,562	336,708		
Hartford and N. Haven.	72	2,354,000	939,000	3,313,932	191,877	85,877	6 1/2		Mad River and L. Erie.	206	2,451,650	2,572,932	4,444,661	In progr.			
Hartford, Prov. and Fitchburg.	12	1,845,610	2,090,124	4,060,869	191,877	85,877	6 1/2		Central Ohio.	138	1,520,927	3,485,076	4,283,443	Recently opened.			
Housatonic.	110	2,000,000	474,177	2,424,066	191,877	85,877	6 1/2		Ohio and Penn.	187	2,451,700	3,219,000	5,670,700	1,111,626	662,117	9	66
Naugatuck.	67	1,031,800	673,996	1,705,796	191,877	85,877	6 1/2		Pittsburg, Mansf. & Newk.	50	1,350,000	2,206,387	3,552,357	328,958	164,479	none	
N. York and N. Haven.	62	2,992,450	2,264,656	4,900,784	191,877	85,877	6 1/2		Sandusky & Hocking Valley.	127	1,350,000	2,206,387	3,552,357	328,958	164,479	none	
N. Haven and N. London.	60	738,258	738,165	1,450,318	191,877	85,877	6 1/2		Spring, Mt. Vernon & L.	113	1,000,000	950,000	In progr.				
N. London, W. & Palmer.	66	609,200	1,073,673	1,684,383	191,877	85,877	6 1/2		Tol. Wash. & St. Louis.	242	2,500,000	4,530,000	In progr.				
Norwich and Worcester.	66	1,232,300	873,439	2,097,121	191,877	85,877	6 1/2		Cin., Log. and Chicago.	255	4,196,679	1,006,125	2,080,483	In progr.			
Albany Northern.	82	439,005	1,625,098	1,840,695	191,877	85,877	6 1/2		Evansville & Crawfordsv.	109	706,945	1,177,596	1,844,541	127,400	64,552		
Black River and Utica.	85	645,330	317,859	974,323	191,877	85,877	6 1/2		Ind. and Cincinnati.	88	1,213,723	1,442,859	2,178,461	966,012	193,142	7	58
Buffalo, Conn. and N. Y.	100	1,487,871	1,011,183	2,819,096	191,877	85,877	6 1/2		Indiana Central.	66	611,400	1,261,179	1,907,911	360,176	134,375	48 1/2	
Buffalo and N. Y. City.	92	798,439	2,537,849	3,401,868	191,877	85,877	6 1/2		Ind., Clev. & Pittsburg.	83	834,157	1,011,971	1,671,544	In progr.			
Buffalo and St. Line.	60	1,800,000	1,040,000	2,494,364	191,877	85,877	6 1/2		Jeffersonville.	66	1,014,252	694,000	200,544	94,318	none		
Canastota and Elmira.	47	434,111	922,393	1,275,796	191,877	85,877	6 1/2		Madison and Indianapolis.	87	1,647,500	1,559,881	3,237,381	In progr.			
Canastota and Niagara F's.	98	1,315,000	2,279,854	3,495,852	191,877	85,877	6 1/2		New Albany and Salem.	287	2,635,121	5,281,548	6,643,189	645,827	371,402	none	
Cayuga & Susquehanna.	56	687,000	506,689	1,187,562	191,877	85,877	6 1/2		Peru and Indianapolis.	73	858,314	858,314	150,000	90,000	none		
Long River.	144	3,758,466	9,250,382	12,737,988	191,877	85,877	6 1/2		Terre Haute and Ind.	73	974,500	604,355	1,502,166	267,512	198,702	10	96
Long Island.	95	1,675,148	601,949	2,555,986	191,877	85,877	6 1/2		Chicago and Rock Is'd.	182	3,141,500	2,387,155	6,214,152	In progr.			
New York Central.	534	24,154,861	14,462,742	25,523,913	6,658,581	3,162,128	8	92 1/2	Chicago and St. Louis.	220			1,077,312	In progr.			
New York and Erie.	464	10,025,968	25,126,689	33,439,431	4,485,999	2,627,118	6	56 1/2	Chic., St. Paul & F'd du Lac.	178	2,300,000	1,325,000	3,625,000	In progr.			
New York and Harlem.	136	6,717,100	4,069,769	8,758,203	1,635,577	234,126	none	19 1/2	Galena and Chicago.	298	4,334,800	1,189,304	5,866,283	1,508,710	942,281	17	113 1/2
Northern, N. Y.	118	1,633,022	4,400,874	6,470,714	620,153	136,754	none	2	Illinois Central.	707	4,419,440	18,001,426	17,698,069	1,532,118			
Oswego and Syracuse.	35	399,000	216,681	723,683	126,540	59,982	3 1/2		Peoria and Quawake.	93	569,889	818,454	1,388,342	In progr.			
Potomac and Watertown.	29	467,200	294,189	749,653	126,540	59,982	3 1/2		Ohio & Miss. (Wst. Div.).	147	1,780,295	3,292,403	4,870,586	Recently opened.			
Rensselaer & Saratoga.	25	610,000	140,000	896,423	211,909	82,600	7		Terre Haute and Alton.	173	2,281,420	1,256,000	3,537,424	In progr.			
Saratoga and Whitehall.	48	500,000	395,600	895,600	71,909	21,089	none		Detroit and Milwaukee.	185	838,000	1,128,964	1,966,969	In progr.			
Saratoga & Binghamton.	80	758,369	1,578,804	2,272,777	169,484	22,503	none		Mich. Central.	282	6,021,916	6,142,023	10,300,147	2,215,283	879,656		
Troy and Boston.	27	487,830	737,079	1,109,822	166,363	55,184	none		Mich. South'n & N. Ind.	475	6,928,900	6,319,224	11,645,208	2,410,000	875,000	10	95 1/2
Watertown and Rome.	97	1,870,378	700,919	2,068,693	404,374	172,474	3 1/2		Green Bay, Mil. & Ch.	155	764,074	442,726	1,193,768	In progr.			
Bellevue Delaware.	64	1,000,000	1,619,000	2,619,000	161,356	76,534	none		Milwaukee and Miss.	106	1,826,428	2,467,889	3,678,757	691,843	417,443	17	86
Camden and Amboy.	94	2,000,000	1,407,200	3,407,200	2,017,127	961,941	12		Milwaukee & Water'n.	72	354,861	132,000	514,238	In progr.			
Camden and Atlantic.	60	369,320	1,622,181	1,729,642	122,417	50,080	none		Milwaukee and Horicon.	15	554,200		864,100	In progr.			
New Jersey Central.	30	8,482,650	690,000	4,310,011	861,514	500,747	10	121	Milwaukee & La Crosse.	51	1,351,832	532,131	1,883,963	In progr.			
New Jersey Central.	30	8,482,650	690,000	4,310,011	861,514	500,747	10	121	Racine and Miss.	47	921,906	380,715	1,289,321	In progr.			
Morris and Essex.	53	1,157,305	375,000	1,556,550	225,893	102,474	6		Hannibal & St. Joseph.	201	292,351	580,000	823,810	In progr.			
Albany Valley.	44	1,687,867	324,564	1,983,377	Recently opened.				North Missouri.	13	1,138,208	694,294	1,093,336	In progr.			
Cataw. Wil. & Eri.	63	1,700,000	1,940,000	3,640,000	129,253	62,450	none		Pacific.	130	2,803,662	3,903,174	4,463,726	160,000	In progr.		
Cumberland Valley.	56	1,099,500	12,211	1,191,833	146,381	66,994	none		St. Louis and Iron Mt.	49	445,170		186,115	In progr.			
Del. La. & Western.	109	2,866,175	1,865,897	4,140,365	In progr.				Panama.		3,743,000		6,564,852	628,850	416,756	9 1/2	10

Railroad Bonds.

NAMES OF COMPANIES. (The following quotations are ex-interest.)	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked.
Alabama and Tennessee River	\$838,000	1st mortgage, convertible	7	1st Jan. 1st July	N.Y.	1872	85	
Buffalo and State Line	600,000	Do. inconvertible	7	1 April, October	"	1866	92½	
Bellefontaine and Indiana	600,000	Do. convertible	7	1 Jan'y, July	"	1866	92½	
Do. do.	200,000	Real estate, convertible	7	1 Jan'y, July	"	1868		
Do. do.	200,000	Income, guar. Cl. Col. & Cin.	7	1 Feb'y, August.	"	1869		
Central Ohio	1,250,000	1st mort. conv. east. sec.	7	Divers	"	1861-64	77	
Do. do.	800,000	2d do. inconvertible	7	1 March, Sept.	"	1865	75	
Cincinnati, Hamilton, and Dayton	500,000	1st mortgage inconvertible	7	20 Jan. 20 July	"	1867	91	
Do. do.	465,000	2d do. do.	7	1 May, Novemb.	"	1869	80	
Cincinnati and Marietta	2,500,000	1st mortgage, conv. till 1862	7	1 Jan'y, July	"	1868	77½	
Cincinnati, Wilmington, and Zanesville	1,300,000	Do. convertible	7	1 May, Novemb.	"	1862	87½	
Cleveland, Painesville, and Ashtabula	567,000	Do. inconvertible	7	1 Feb'y, August.	"	1861	92½	
Cleveland and Pittsburgh	800,000	Do. convertible	7	1 Feb'y, August.	"	1860	93	
Do. do.	1,200,000	Do. on Branches	7	1 March, Sept.	"	1873	75	
Cleveland and Toledo	625,000	Do. inconvertible	7	1 Feb'y, August.	"	1863	86½	
Chicago and Mississippi	800,000	Do. conv. till 1857	7	1 April, October	"	1862-72	85	
Do. do.	1,200,000	Do. inconvertible	7	1 April, October	"	1862-72	85	
Covington and Lexington	400,000	Do. do.	6	1 April, October	"	1862	73	76
Do. do.	1,000,000	2d mortgage, convertible	7	1 March, Sept.	"	1863	64	66
Delaware, Lackawanna, and Western	1,500,000	1st mortgage, do.	7	1 April, October	"	1873	90	90½
Fort Wayne and Chicago	1,250,000	Do. conv. till 1863	7	1 Jan'y, July	"	1873	80	
Galena and Chicago	2,000,000	Do. inconvertible	7	1 Feb'y, August.	"	1863	97	98
Do. do.	2,000,000	2d mortgage, do.	7	1 May, Novemb.	"	1875	89	90
Great Western (Illinois)	1,000,000	1st mortgage, do.	10	1 April, October	"	1868	86	90
Green Bay, Milwaukee, and Chicago	400,000	Do. convertible	8	10 April, 10 Oct.	"	1863	93	96
Jeffersonville	300,000	Do. 2d sec. inconv.	7	1 April, October	"	1873	75	
Indiana Central	600,000	Do. convertible	7	1 May, Novemb.	"	1866	90	
Indianapolis and Bellefontaine	450,000	Do. do.	7	1 Jan'y, July	"	1860-61	80	85
Indianapolis & Cin'ti (for Lawb. & U. M.)	500,000	Do. conv. till 1857	7	1 March, Sept.	"	1866	86	90
La Crosse and Milwaukee	950,000	1st mort. 1st sec. conv. till 1864	8	1 May, Novemb.	"	1874	86	
Lake Erie, Wabash, and St. Louis	3,400,000	1st mortgage, conv. till 1869	7	1 Feb'y, August.	"	1865	76½	78
Little Miami	1,500,000	Do. inconv.	6½	2 May, 2 Nov.	"	1863	79½	80½
Michigan Central	1,000,000	No mortgage, convertible	8	1 April, October	Boat.	1860	99½	101
Do. do.	600,000	Do. do.	8	1 March, Sept.	"	1869	100½	101
Milwaukee and Mississippi	600,000	1st mort. 1st sec. conv. till 1857	8	1 Jan'y, July	N.Y.	1862	96½	97½
Do. do.	650,000	Do. 2d do. 1858	8	1 April, October	"	1863	96	97
Do. do.	1,250,000	Do. 3d do. 1860	8	1 June, Decemb.	"	1877	90	91
New Albany and Salem	500,000	Do. 1st section	10	1 April, October	"	1868-62	90	91
Do. do.	2,325,000	Do. oth. sec. con. till 1858	8	1 May, Novemb.	"	1864-75	90	91
Northern Cross	1,200,000	1st mortgage, convertible	8	1 Jan'y, July	"	1873	94	97
Ohio and Indiana	1,000,000	Do. do.	7	1 Feb'y, August.	"	1867	90	
Ohio and Pennsylvania	1,750,000	Do. do.	7	1 Jan'y, July	"	1868-66	94	97½
Do. do.	2,000,000	Income, convertible	7	1 April, October	"	1872	79	81
Pennsylvania (Central)	5,000,000	1st mortgage, conv. till 1860	6	1 Jan'y, July	Phila.	1880	96½	97½
Racine and Mississippi	680,000	Do. conv. sink'g f'd	8	1 Feb'y, August.	N.Y.	1876	84½	85
Scioto and Hocking Valley	300,000	Do. 1st sec. conv.	7	1 May, Novemb.	"	1861	88	78
Steubenville and Indiana	1,500,000	Do. convertible	7	1 Jan'y, July	"	1865	88	100
Terre Haute and Indianapolis	600,000	Do. do.	7	1 March, Sept.	"	1866	77	80
Terre Haute and Alton	1,000,000	Do. do.	7	1 Feb'y, August.	"	1862-72	77	78
Do. do.	2,000,000	2d do. do.	8	1 Feb'y, August.	"	1870	77	78

NAMES OF COMPANIES. (The following quotations include the accrued interest.)	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked.
Baltimore and Ohio	2,500,000	Mortgage	6	1 April, October	Balt.	1886	84½	85
Do. do.	1,128,500	Do.	6	1 Jan'y, July	Balt.	1875	87½	88
Chicago and Rock Island	2,000,000	1st mortgage, conv. till 1858	7	10 Jan. 10 July	N.Y.	1870	93½	94
Erie Railroad	3,000,000	1st mortgage	7	1 May, Novemb.	"	1867	108½	110
Do. do.	4,000,000	2d mortgage, convertible	7	1 March, Sept.	"	1869	94½	95
Do. do.	6,000,000	3d mortgage	7	1 March, Sept.	"	1863	92½	93½
Do. do.	4,000,000	Not conv. Sink Fund, \$420,000	7	1 Feb'y, August.	"	1875	90½	91
Do. do.	4,351,000	Convertible, Inscription	7	1 Feb'y, August.	"	1871	83	83½
Do. do.	3,500,000	Convertible	7	1 Jan'y, July	"	1862	86½	87
Hudson River	4,000,000	1st mortgage, Inscription	7	1 Feb'y, August.	"	1869-70	87	88
Do. do.	2,000,000	2d do. do.	7	16 June, 16 Dec.	"	1860	87	88
Do. do.	3,000,000	3d do. convertible	7	1 May, Novemb.	"	1870	69	69½
Illinois Central	17,000,000	Mortgage, inconvertible	7	1 April, October	"	1875	88	88
Do. (Free Land)	3,000,000	M'ge 345,000 acrs-priv 7 shars	7	1 March, Sept.	"	1860	98	93½
Michigan Southern	1,000,000	1st mortgage, inconvertible	7	1 May, Novemb.	"	1860	92	95
New York and Harlem	1,800,000	Do. do.	7	1 May, Novemb.	"	1861-72	85	86½
New York and New Haven	750,000	No mortgage, do.	7	1 June, Decemb.	"	1859-60	97	97½
New Haven and Hartford	1,000,000	1st mortgage, do.	6	1 Jan'y, July	"	1873	91	92
Northern Indiana	1,000,000	Do. do.	7	1 Feb'y, August.	"	1868	85	85½
Do. Goshen Branch	1,500,000	Do. do.	7	1 Feb'y, August.	"	1863	88	89½
New York Central	8,287,000	No mortgage, do.	6	1 May, Novemb.	"	1864	102	102½
Do. do.	3,000,000	No m'ge conv. from June 57-60	7	15 June, 15 Dec.	"	1866	104	105
Panama, 1st issue	900,000	Convertible till 1856	7	1 Jan'y, July	"	1866	104	105
Do. 2d do.	1,478,000	Do. till 1858	7	1 Jan'y, July	"	1866	104	105
Reading, issued 1843	1,573,000	Mortgage, inconvertible	6	1 Jan'y, July	Phila.	1860	93	94
Do. do. 1844, '48, '49	1,300,000	Do. convertible	6	1 Jan'y, July	"	1860	87½	88
Do. do. 1849	3,469,000	Do. inconvertible	6	1 April, October	"	1870	87½	88

CITY SECURITIES.	Int't payable.	Off'd. Asked p. ct. p. ct.	CITY SECURITIES.	Int't payable.	Off'd. Asked p. ct. p. ct.
New York, 7 per ct. 1857	Feb'y, 100	97½	Milwaukee, 7 per ct. coup. X	Divers	88½ 80½
Do. 5 do. 1858-60	May, 96	97½	New Orleans, 6 per ct. cp. R.R. X	Do.	75 78
Do. 5 do. 1870-75	August, and 96½ 97½		N. Orleans, 6 per ct. cp. municip. X	Jan'y, July	83 83
Do. 5 do. 1890	November, 96		Philadelphia, 6 per ct. 1870-98	Jan'y, July	91¼ 91½
Albany, 6 per ct. coup. 1871-81 X	Feb'y, August, 88		Pittsburgh, 6 per ct. coup. X	Divers	76 77
Alleghany, 6 per ct. coup. X	Jan'y, July, 66		Quincy, 8 per ct. coup. 1868 X	Jan'y, July	92½ 92½
Baltimore, 6 per ct. 1870-90	Quarterly, 96½ 98½		Racine, 7 per ct. coup. 1873 X	10 Feb'y, Aug.	81 85
Boston, 6 per ct. coup. X	April, October, 99 100		Rochester, 6 per cent. coup. X	Divers	95 95
Brooklyn, 6 per ct. coup. Long X	Jan'y, July, 100 101		St. Louis, 6 per ct. coup. Long X	Do.	79 80
Clev'nd, 7 per ct. cp. W.W. 1870 X	Do. do., 100½ 101½		Do. do. Municipal. X	Do.	79½ 80½
Cincinnati, 6 per ct. coup. X	89½ 90		Sacramento, 10 per ct. 1862-74 X	Do.	81½ 81½
Chicago, 6 per ct. coup. 1873-77 X	Divers, 90 91		S.F. & P. 10 per ct. 1865 pay. N.Y. X	May, Novemb.	78½ 80
Detroit, 7 per ct. cp. W.W. 1873-78 X	Jan'y, July, 100 101		Do. 10 per ct. cp. 1871 X	Do.	97 99
Dubuque, 8 per ct. cp. Long X	March, Sept., 100 101		Do. 10 do. pay. N.Y. X	Jan'y, July	94 95
Jersey City, 6 per ct. cp. W.W. 1877 X	Jan'y, July, 96		Do. 6 per ct. pay. N.Y. 1875 X	Do.	160 65
Louisville, 6 per ct. cp. 1880-88 X	Divers, 70 80		Wheeling, 6 per ct. coup. X	Divers	97½ 97½
Memphis, 6 per ct. coup. 1882 X	Jan'y, July, 66 70		Zanesville, 7 do. X	April, October	

Cincinnati Stock Sales.

By KIRK & CHEEVER.

For the week ending March 25th, 1856.

BONDS.	Per ct.
Little Miami, 6 per ct. Mort.	80
Covington & Lexington, 2d Mort. 7 per ct.	65
Ohio & Mississippi, 2d Mort. 7 per ct.	45
Marietta & Cincinnati, 7 per cent 1st Mort.	70½
Indianapolis & Cin., 2d Mort. 7 per ct.	80
Hillsboro' & Cin., 7 per ct. 1st Mort.	50
Cin., Ham. and Dayton, 2d Mort. 7 per ct.	69
Cin., Wil. & Zanes 2d Mort. 7 per ct.	69
Covington & Lexington, 10 per ct. Income	60

STOCKS.	Per ct.
Cin., Wil. and Zanesv., 18—Cin., Ham. and Dayton, 67—	
Col. & Xenia, 86—Cincinnati & Ohio, 7½—Central Ohio, 12½—	
—Covington & Lexington, 19—Dayton and Western, 18—	
Eaton and Hamilton, 25—Fort Wayne and Southern, none.	
Indiana Central, 48½—Indianapolis and Cincinnati, 58—Little	
Miami, 91—Mad River and Lake Erie, 18—Marietta and Cin.,	
16—Ohio and Mississippi, 7½—Hillsboro' and Cincinnati, 18—	
Junction (Indiana), —Peru and Indianapolis, 18.	

By HEWSON & HOLMES.

For the week ending March 26th, 1856.

BONDS.	Per ct.
\$5,000 Cin. Ham. and Dayt. 7 per ct. 2d Mort. 25 (& int.)	
2,000 Little Miami, 6 per ct., 1st Mort. 30	
6,000 Cov'g & Lex., 7 per ct. 2d Mortgage 66	
1,000 Ohio & Miss 7 per ct. 1st Mort. 66	
3,000 Cin., Wil. & Zanesv., 7 per ct. Income 40	
8,000 Ind. and Cin., 10 per ct. Income, due 1858 95	
2,000 Hillsboro' and Cin., 7 per ct. 1st Mort. 50	
1,500 Cin. Camb. & Ohio, 10 per ct. Real Estate 40	
600 Ind. & Cin. 7 per cent Dividend 69	
410 Little Miami, Dividend Scrip, old 92	

STOCKS.	Per ct.
54 Shares Ohio & Mississippi 6½	
89 " " " (30 days) 7	
200 " " " " 7½	
18 " Cin. & Chicago 8	
25 " Columbus & Xenia 85½	
23 " Little Miami 91	
47 " " " 91½	
36 " " " 91½	
20 " " " 92	
112 " Cin., Wil. & Zanesv. (80 days) 18	
40 " Junction 7½	
20 " Cincinnati, Hamilton, & Dayton 65	
16 " Marietta and Cincinnati 16	

De Coppet & Co.'s Circular.

[TRANSLATED EXTRACT.]

New York, April 1st, 1856.

The tone of our stock market has not materially changed since our advices of the 24th March; the uninterrupted favorable news from Europe gives it firmness and steadiness, but speculative spirit remains quiet, and whilst railroad stocks have generally risen, our subjoined table of daily quotations shows a decline on those of the State stocks, which have been more freely thrown on the market. Confidence in the future is clearly perceptible in the disposition of Americans as of Europeans, to participate in the negotiation of new loans of well known railroads, and even of some recently introduced, which we mention in another paragraph.

In State stocks the business has been moderate in Indiana 6s, Louisiana 6s, Virginia 6s, and active in Missouri 6s, at a rise of ½ per cent. on the two first, and a decline of 1½ and ¾ on the two last.

In city and county bonds there is a steady demand for small accounts of Milwaukee 7s, Detroit 7s, St. Louis 6s, and Chicago 6s, and prices remain firm or looking up.

Railroad bonds—at the Stock Exchange, transactions in Hudson 1st mort. and Erie 7s, 1875 and 1883, have been limited, and without any variations of importance. Illinois Central Construct'ns were active, and have risen ¾ per cent. New York Central 6s and 7s quiet, and have somewhat declined. All private sale transactions have been generally moderate, but we notice the negotiation of a loan of \$4,000,000 of the Hannibal and St. Joseph railroad, and of \$600,000 1st mort. 3d section sinking fund bonds of the Milwaukee and Mississippi railroad. Prices for the several issues of the latter remain very firm.

Railroad Stocks.—The speculation in Cleveland and Toledo has been animated, and at a rise of 2½ per cent. There has also been some activity in Erie, Reading, Michigan Southern, New York Central, Cleveland and Pittsburgh, and Chicago and Rock Island, with more or less advance in rates, except on the latter. Milwaukee and Mississippi has risen 2½ per cent.; Panama declined ¾ per cent.

Money.—Loans on call from 6½ per cent., the latter rate more general. Business paper from 7½ per cent., according to class and time to run. Exchanges on Europe have declined in some places. Principal business in sterling, 109¼@109½; Paris, 5.17½@5.20.

Extract from the Circular of Robt. Benson & Co., per Canada.

LONDON, March 14, 1856.

Little of a definite nature has transpired during the week, as to the progress of the peace negotiations. It is said that the various points are all agreed to, and the admission of Prussia to a share in the remaining deliberations, is looked upon as corroborative of this report. The increased confidence thus given to the expectation of peace, has had a favorable influence on our securities. Since the settlement of the monthly account, consols have risen, and the money market, notwithstanding the payment yesterday of £2,000,000 of the new loan, is without pressure, although in the early part of the week high rates of interest were paid. Consols were quoted in our last at 91¾ for 10th April, and to-day we quote them at 92¾ for money, and 92½¾ for the account.

In American securities the market has been quiet. There have been few transactions in Railroad bonds, and our quotations generally are below those of last Friday. Reading bonds of 1870, have changed hands at 72. Erie 3d mort. at 85½, and sinking fund bonds at 88. We quote Illinois Central Construction bonds at 82½, and Free-lands the same, ex-coupon. Pennsylvania Central 88a89. A considerable variety of State stocks have changed hands during the week. Tennessee bonds of 1880 have been sold to some extent at 89, and are still offered at that price. The other transactions have comprised Kent's bonds at 90, Alabama and Virginia sterling at 86, and Pennsylvania 5 per cent stock at 76. Pennsylvania bonds we quote at 82a83; and Maryland at 88a89.

ROBT. BENSON & CO.

American Railroad Journal.

Saturday, April 5, 1856.

City Railroads.

The Boston and Cambridge Railroad has commenced operations. The wooden cars are from the Troy Factory and are the finest specimens of that work ever yet produced. The same manufacturers have built four new cars for the Third Avenue Railroad Company in this city, said to be much lighter than those formerly built.

The Boston Company have a stock of iron cars also, to be tested in connection with the wooden vehicles. They may be seen at the establishment of PASSAVANT, ARCHER & Co., in West 25th st., New York. They weigh but 3,800 lbs., and as to form are a beautiful carriage. They have, what cannot be given the wooden cars, a tasteful shape. Wood, perhaps, admits a finer paint finish and in this respect the wooden cars will have the advantage if such it be, which really we do not see.

As the Boston companies have occasionally visited New York to examine the city railroads, we suppose they desire to learn all that can be gathered by a careful study of these conveniences. Among other accomplishments possessed in this quarter is a faculty of making roads cost apparently twice as much as by any possibility of chances they could be made to amount to; this practice of watering the stock will doubtless be as readily comprehended in State street as in Wall street. By and by the Cambridge road will pay fat dividends—the public will grow jealous. Insist on lower fares, more cars less crowded, and various other improvements. Where will be the

weapons to fight the public? We understand how to manage that here. Double the capital stock and let two dollars represent one. The market quotations will run down to fifty; instead of twenty per cent. dividends you will have but ten. Of course, the City Government won't be hard on you. They are not here. It might not be a bad idea to distribute a little of the diluted stock. It may not be the case in Boston, but money has a most excellent effect in our Council.

Many of the New York cars are dirty. We should be glad to have some more attention given to a cleanly condition. Some of the roads are so located that great care certainly is necessary to keep them in neat order, their tracks lie in unpaved streets and the mud or dust is a constant annoyance; still with proper care the car might be nearly as nice a vehicle as the stage. This, however, is not the case except on avenues where there is a direct competition by omnibus lines. Filthy conductors and profane drivers are not inducements to ride. Nearly every car in this city has a disagreeable odor absorbed from stable atmosphere. This is particularly unpleasant in a damp muggy day. It is produced by permitting communication between the car-house and the stable—in some cases there is no connection save by small windows for purposes of ventilation. The effect is nevertheless as bad as in any other and should be remedied. A misfortune is, that the officers being much in this gas do not discover it, and will not believe that any such nuisance exists. Strangers nostrils are more sensitive.

Second Hand Locomotive.

We call attention to the advertisement in this week's paper for the above which can be bought at a bargain of ELLIOTT & Co., No. 4 William st., New York.

Paige's Adjustable Car Brake Blocks.

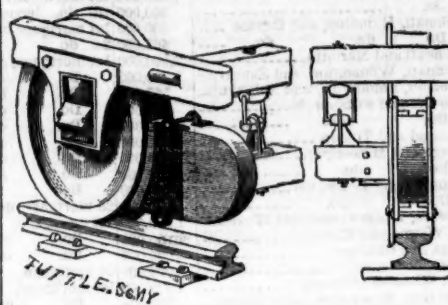
When wooden blocks were first used for bearing surface against the periphery of wheels, they were formed by cutting the required form in the side of the grain—the fibre being in a vertical position when hung. The pressure of the wheel in its frequent action caused the wood to exfoliate so that the simple wear of the block was slight compared to the constant destruction that was occurring from the other cause. Then leather shoes were added, and finally in some cases iron has been used. The repairs of the brake blocks have been a large item, and on some roads where a heavy passenger traffic is done, it is customary to devote a department to this branch of manufacture. For the purpose of economizing material, wooden brake blocks have been faced with additional wood, which is nailed to the block and may be renewed at pleasure. The difficulty of holding the additional pieces has been caused by the fact that any small metallic fixtures in contact with the tread of the wheel, are liable to become highly heated, and thus to burn themselves loose.

The arrangement contrived by PAIGE is not a revolution of old notions, but seems to have been suggested by an attempt to improve existing plans. An English inventor had patented a contrivance, which consists of a shell of cast iron filled with blocks of wood, the blocks being readily replaced by others when much worn.

Could not the shell be so arranged as to adjust the block, without renewing? Nothing was easier; knock out the back of the box and slip the block

forward as necessary; disconnect the sides and provide them with burs to clinch the wood which was placed between them with the end of the grain to the wheel, then draw the jaws together with screw bolts.

The annexed cut perfectly illustrates the contrivance.



It will be seen, that when the shoes are shortened the necessity of making new is obviated, nothing more being needed than to move the old block forward.

Wooden shoes are preferable to iron, because they hold better with less wear on the wheel, but the rapidity with which severe friction destroys them renders their maintenance a constant source of trouble and expense.

Paige's block has been thoroughly tried.

On the Hudson River Railroad where attached to a car for purposes of experiment, but three of the blocks have as yet been moved forward, although in constant use during five months. With the old block it was impossible to run to Troy and back without new-shoeing the brakes.

On the Lowell and several other roads they have been used with equally favorable results.

There can be no doubt that the manner of hanging the block, which is from the beam instead of the brake head, has an important influence in preventing wear, as a uniform bearing is secured on the face of the wheel.

The facts are such after several months' trial as to justify us in declaring them superior to all others in use. We know this to be the opinion of those Superintendents who have used them.

The beams at present in use may be employed in attaching these blocks, no change being necessary except at the ends which are easily fitted to the new arrangement.

Qualifications for Architects.

In a late architectural work published in London, we observe a position assumed by the author, that is unfortunately too common, viz: that the Architect is to be an artist and not an Engineer. It was unnecessary to impress by any further teaching such a lesson on the Architect of this day. More stupidity in building is rarely seen than in the works of those of our designers, who exhibit the most taste. Especially are men careless in selecting a foundation. We notice as an illustration a church on Cathedral street, Baltimore, opposite Richmond street, that is badly defaced by neglecting this important matter. One of the tower buttresses, has settled, dragging down the side of the tower, which is fractured through all the weak points. The buttress projects six feet at the bottom and is in this case anything but a beautiful feature.

To Run a Tangent between Two Curves already Located.

From the "Mechanic's and Engineer's Book of Reference and Engineer's Field Book," p. 383.
—Published by STRINGER & TOWNSEND.

Problem by CHARLES HASLETT, Civil Engineer.

Fig. 8.

Let the curve C R A G H, of 2000 feet radius, be located from tangent C K; and let E S B D be a curve of 2605 feet radius, located from tangent E F. We are required to find the points A and B having a tangent common to both.

Suppose R to be the point in the first curve, and S the point in the second. There being obstructions in the way, we will run the zigzag line R L P S, making R L tangent to R, and P S tangent to S.

Suppose R L Q = 20°
and T P S = 15°;
let R L = 1100 feet, L P = 1800, and P S = 1400.

Assume radius N R as a meridian; that is, suppose N R to be due north. Then will R L be due west, L P south 70° west, P S south 85° west, and radius S M north 5° west. These artificial courses, then, will show the relative bearings, with which we obtain the following traverse:

Course.	Distance.	North'g.	South'g.	Easting.	Westing.
North....	2000	2000	0000	0000	0000
West.....	1100	0000	0000	0000	1100
S. 70° W....	1800	0000	444.63	0000	1221.60
S. 85° W....	1400	0000	122.02	0000	1394.66
N. 5° W....	2605	2595.07	0000	0600	227.05
		4595.07	566.65	0000	3943.31

Difference northing and southing
(4595.07—566.65) = 4028.42; then

$$\frac{3943.31}{4028.42} = .97882 = \text{natural tangent } R N G =$$

44° 23' = course of N M = N. 44° 23' west, and angle S M D = 39.23, or 44° 23'—5°.

To calculate M N make the difference of latitude 4028.42 = cosine 44° 43', and the required distance N M = radius. Then we have by natural cosines

$$\frac{4028.42}{\cosine\ 44^\circ\ 23'} = \frac{4028.42}{.71468} = 5636.7 = M N.$$

Or by logarithms:

As cosine R N M = 44° 23' 9.854109
Is to R..... 10.000000
So is difference of latitude 4028.42. 3.605134

To N M = 5636.7..... 3.751025

The triangles A N I and B M I being similar, we have by logarithms (Davies' Legendre, book II, prop. X)—that is, by "composition and division:—"

As N M = 5636.7..... 3.751025
Is to R..... 10.000000
So is sum of radii 4605 = (2000+2605) 8.663230

To cosine A N I = B M I = 35° 13' 9.912205

Having now determined the angle R N I = 44° 23', and the angle A N I = 35° 13', the angle R N A becomes = to their difference = 9° 10'.

Therefore continue the curve from R towards A, 9° 10' of curvature, and we have the tangent

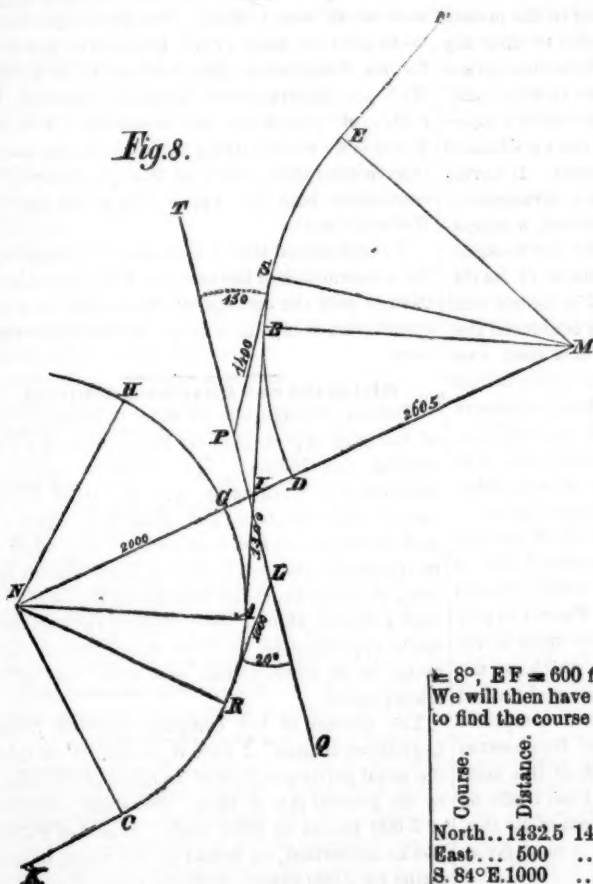


Fig. 8.

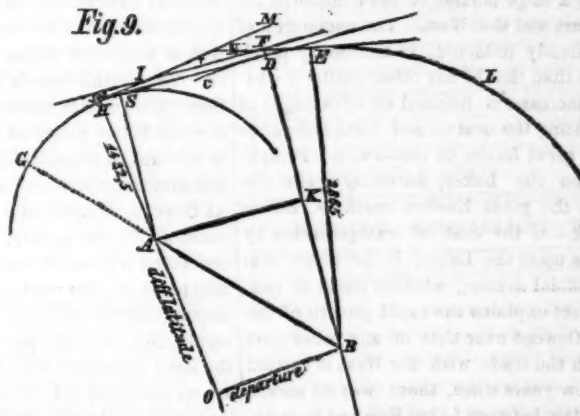


Fig. 9.

8°, E F = 600 feet, and radius E B = 2865 feet. We will then have the following traverse, by which to find the course and distance of A B:

Course.	Distance.	North'g.	South'g.	Easting.	Westing.
North..	1432.5	1432.50	.....	.....	.....
East...	500	.....	.....	500	.....
S. 84° E.1000	.....	.....	104.50	984.60	.....
S. 76° E. 600	.....	.....	145.20	582.20	.....
S. 14° W.2865	.....	.....	2780.07	.....	692.72
Total...	1432.50	3029.77	2066.80	692.72	

Difference of latitude = 1597.27; departure = 1874.08.

Departure = 1874.08
diff. lat. = 1597.27 = .86026 = natural tangent 40° 42' = course A B = angle H A G.

Diff. lat. = 1597.27 = 1597.27
cosine course = cosine 40° 42' = .75813

2106.80 = distance A B.

Then $\frac{\text{diff. radii}}{A B} = \frac{1432.50}{2106.80} = .67992 = \text{natural cosine } 47^\circ\ 10' = D B A = S A G.$

Now 47° 10'—40° 42' = 6° 28' = H A S. Then curve from H 6° 28' = 162 feet nearly to S. Now A B makes with B E an angle of 40° 42' + 8° + 6° = 54° 42'. Hence we must curve from E to D 54° 42'—47° 10' = 7° 32' curvature = 377 feet

distance. The points S and D will be the termini of the required tangent.

Then difference of radii \times natural tangent (D B E = 47° 10') = 1439.5 \times 1.07864 = 1545.15 = A K = S D = length of tangent. Now when the two curves are so situated as to be seen the one from the other, assume two points as near as you can judge to the true termini of common tangent. Cause about a dozen small straight stakes or pins to be set up endway about twenty feet apart from one of the assumed points or curves. Then set the instrument at the other, and see how tangent from instrument strikes the row of stakes. Note the difference, and move the instrument until tangent therefrom strikes as tangent to the row of stakes. Make a point where it does. Set the instrument over said points, and in like manner see how tangent from instrument strikes the other curve. Thus we dispense with all the previous calculation.

Steam on the Preston and Kendal Canal.

The attempt to introduce steam on the canal between Preston and Kendal, has answered the expectation formed of it. A screw boat is at work; the engine 20-horse power, having two 8-inch cylinders, is placed in one boat, and four others are attached, forming a boat train. The quantity of coal conveyed each trip is about 200 tons, and a speed of two miles per hour is maintained. This speed might be increased, we believe, did the depth of water in the canal permit it; but at present, if a greater speed is attempted, a swell of water is created in front of the boat, reducing the level of

point A required. Again, we have S M I = 39° 23', and the angle B M I = 35° 13', consequently curve from S to B 4° 10' of curvature, and we have the tangent point B required.

Now to find the length of tangent A B, multiply the sum of the radii 4605 by the natural tangent of 35° 13', and we have the length required.

CASE 2D. FIG. 9.

Suppose the two curves to be connected by a common tangent, instead of running in opposite directions as in Case 1st, curve the same way, as G H S and C D E L. It is required to find the position of the tangent S D.

Assume the points H and E; from H lay off tangent H I; from E lay off tangent E F; join F and I by a straight line, if convenient, or by a traverse, if there be obstructions. Let A H be an artificial meridian, and, as in Case 1st, calculate the distances A B, also its course = angle H A G; this will give also the angle E B A.

Suppose radius A H = 1432.5, tangent H I = 500 feet, angle M I F = 6°, I F = 1000 feet, N F T

the canal at the bows so much as to cause the boat to scrape the bottom. By the old system, one horse dragged a boat of from forty to forty-five tons burden, at a rate of one mile and a quarter per hour. During the last fortnight of December last, an extra new iron boat, capable of carrying fifty-seven tons, has been attached to those previously towed by steam (making the 5 now used,) and with this very large additional weight, it has only made a difference in speed of three-quarters of an hour per day, and the addition of this extra weight has consequently retarded the boats almost imperceptibly. A new iron boat has just been built for the same purpose, to be worked by steam power. She is a twin paddle-boat. Two boats, each sixty feet long, having one central paddle working between them, and this arrangement prevents the usual swell which the ordinary river paddle-boats create. This steamer has been tried, and found to require less power to do the same work than the screw boat alluded to above. These experiments, combined with the substitution of iron for wood in the construction of the boats, open a new feature in the history of canal navigation.—*Preston (Eng.) Pilot.*

Syracuse and Binghamton Railroad.

The financial success of this road was predicated on the formation of a *continuous* line from Binghamton to Oswego. With such a line, there seems to be no doubt that the expectations formed of it would be fully realized.

The city of Oswego is the channel or gate through which passes a large portion of the commerce between the East and the West. The commerce of this port, already immense, is increasing much more rapidly than that of any other similarly situated. This increase is founded on advantages of position; it being the nearest and most accessible port on the great Lakes, to tide-water. Freight once afloat on the Lakes, naturally seeks the ports nearest the great Eastern markets, before breaking bulk—as the cost of transportation by sailing vessels upon the Lakes, is far below that upon any artificial avenue, whether canal or railroad. This fact explains the rapid growth of the commerce of Oswego over that of any other port through which the trade with the West is carried on. Only a few years since, there was no means of communication between Lakes Erie and Ontario. The trade of Oswego, consequently, was confined to the territory bordering the latter Lake. The opening of the Welland Canal, at once rendered Oswego accessible from all the upper Lakes. Her intercourse with these, for the reasons stated, has increased in a surprising ratio. The enlargement of the Welland Canal (which now takes vessels of 500 tons burden,) will increase in equal degree the advantages now enjoyed by Oswego. The enlargement of the Oswego Canal is going forward with equal pace with that of the Erie. It may be proper to state, that, when the enlargement of the Erie Canal was first decided upon, the plan did not embrace the Oswego Canal. This exception became, we believe, a constitutional provision, which has been corrected, but not till the exception had operated to the serious disadvantage of Oswego.

Oswego is not only much nearer New York harbor than any other Lake port, but it has advantages which none other possesses, in a very large return freight. The canal statistics show the proportion of tonnage of *down* and *up* freight to be as five to one. Canal boats and the Lake craft have, therefore, only one-fifth the *up*, to their *down* tonnage. The ability of supplying to any port a large

amount of *up* freight, attracts to it, as a matter of course, *down* freight. It is a great consideration for a vessel to pay *expenses* by a return cargo. A very large amount of *return* freight is supplied by *salt*, which is now manufactured at and near Syracuse, to the extent of something near 200,000 tons annually. The greater part of this goes to Oswego for shipment to the upper Lake ports.—This salt of itself is the means of bringing to the place of its shipment a much larger tonnage of Western produce. This *up* freight is one of the strong points in favor of Oswego. Could it be increased, the *down* freight would increase in much greater ratio. If, say 150,000 tons of coal could be placed at Oswego for shipment, it would be the means of bringing to it twice that tonnage of Western produce. This produce would have to be sent to New York either over railroad or canal.—As before stated, the success of the Syracuse and Binghamton railroad was predicated upon the formation of the entire line. But up to the present moment it has been found impossible to effect any arrangement for a connection with the Oswego and Syracuse railroad, or even with the Oswego canal. The original scheme remains to be carried out.—When only partially executed, a result predicated upon the whole is not to be expected. It having been found impossible to effect any arrangement with the Oswego and Syracuse railroad, a company, therefore, has been organized for the construction of a *new* one on the Eastern banks of the river. The parties largely interested in the old road from Oswego to Syracuse, are fully convinced that it is the better policy to build the new road, than to attempt to use the old one. The latter neither accommodates the *way* nor the *through* business. At Oswego, it terminates upon land very much elevated above the harbor, with which it cannot be connected without the construction of a considerable piece of *new* road at a very large expense.—Should this be effected, the business of the city would then be only partially accommodated, as the most important manufacturing establishments are on the north side of the river. Parties largely interested in the old road, are those most active in the construction of the new one, which, we understand, is to be commenced at once, and pushed vigorously to its completion. When completed and connected with the Syracuse and Binghamton railroad, we have no doubt the whole line must have a very large business, as the local traffic on each is very good, while for the extent of its *through* traffic, hardly a route in the country is more favorably situated.

The trade of the West seeks the port nearest tide-water, which is Oswego. A railroad to accommodate this must terminate at that point. We have only to refer to past numbers of the JOURNAL for the extent of this trade, and the ratio of its increase. But Lake Ontario itself, particularly on the Canada side, is surrounded with one of the most productive and best cultivated portions of the continent—the great market for which is New York. The recent treaty of reciprocity with the Canadas allows all their produce to come in *duty free*. This trade of itself will double the business and population of Oswego in a very few years. In return there will be an immense traffic in *bonded* goods. Canada now imports most of her foreign merchandise through New York. As a general rule, Lake Ontario can be navigated in

the winter season. With a railroad to Oswego, communication could be constantly maintained between New York and Canada the year round.

At Binghamton the road will have the advantage of two parallel roads to New York—the Erie, and the Delaware, Lackawanna and Western, which will afford ample accommodations for all the produce brought to that point. The road must constitute the northern outlet for the anthracite coal fields of Pennsylvania. The demand for coal for the Lakes, and for the City of Syracuse will soon be equal to a very large traffic. The rates at which coal can be laid down at Syracuse will give most remunerating rates for its transportation. The line from Binghamton to Syracuse holds the key to this traffic. We have little doubt that Oswego, with the above road, will soon supply a much larger amount of freight than Buffalo. Were the Erie R. R. to be built to-day, a connection with Oswego would be considered of equal importance as one with Buffalo. The great object would be to meet the trade of the *West* at the best point for its debarkation *East*—which is at Oswego. With the construction of artificial highways, the routes of commerce are constantly changing. There is no more striking instance of such change than in the rapid growth of Oswego, following its connection with the upper Lakes, through the Welland Canal.

We understand that it is proposed to commence the construction of the new line from Syracuse to Oswego with the opening of the season, with the expectation of having it in use for the winter business.

Richmond and Petersburg Railroad.

This line, though but 22 miles in length, is one of the most important in the State, forming a connecting link between the railroads extending northward to Washington, and the other Northeastern Atlantic cities, and those lines which extend to the South and South-west. It is much to be regretted that a work uniting these railroad systems, so to speak, while benefitting the public to such a degree, should have been so far comparatively unproductive to those who invested their means in its construction, and their time in its management.

The charter of the company, granted in the Legislative session of 1835-6, conferred on them the usual privileges granted to railroad companies by the general law of 1832. The stock to consist of 5,000 shares of \$100 each. Board of Public Works authorized, on behalf of the State, to subscribe for 2,000 shares, with the right of appointing two of the five Directors, who, with the President, were to constitute the Board. At subsequent dates, the company were empowered to borrow money on bond and mortgage, and various methods were devised and executed for the purpose of relieving them from financial embarrassments.

With regard to the route of this road, it is in general favorable—with the exception of river crossings. The two most important of these are, of course, the James river at Richmond, and the Appomattox at Petersburg. We believe the company's cars have not yet crossed the latter; but a substantial bridge structure is owned by them for stage travel. Other streams are Falling and Swift's creeks—the latter having a width of about 250 feet.

Shortly after organizing, in May, 1836, the com-

pany purchased the Turnpike road extending between the same terminus, and connecting by a bridge of their own with Petersburg. In the summer of that year, the work of construction was commenced, under the superintendence of MONCURE ROBINSON as Chief Engineer. The estimated cost of the whole work, including buildings and equipment, was \$600,000. The financial crisis of 1837 very nearly prostrated the company, but the State came to their relief, and by anticipating the amounts due from the Board of Public Works, and granting loans, enabled the enterprise to move forward. The road was opened in May, 1838; and the bridge over James river completed in September following.

Like other works of the kind built at that date, the track consisted of a light flat bar rail, laid upon continuous string-pieces. This was subsequently altered, but again restored in 1843, when a new rail was put down $2\frac{1}{2} \times \frac{3}{4}$. The present superstructure was commenced in 1853, and finished the year following. The first locomotives put upon the line were brought from England.

The first President of the company was W. H. MACFARLAND, Esq. This gentleman shortly afterwards resigned, having been elected Lieut. Governor of the State. His place was taken by HOLDEN RHODES, Esq., under whose management the work was completed. It would be uninteresting to trace all the executive changes since made.

It has been already stated that the authorized capital was \$500,000. Of this, \$300,000 had been subscribed by individuals; but owing to the pressure of the times, assessments came in slowly. The road cost, at its completion, over \$638,000. To meet this deficiency, the managers were obliged to resort to various methods for procuring loans. Railroad first, second, and third mortgage bonds were then "few and far between." A loan of \$100,000, in five per cent. stock at par, had been offered by the State; but this was declined, as the bonds could not be negotiated on the terms specified. In 1837, the President obtained the use of a fund of \$98,000, belonging to the Board of Works, for which six per cent. interest was payable. This sum was afterwards increased to \$150,000, the principal being made payable, \$15,000 every six months from the date of the fourth semi-annual payment of interest. The company having failed to pay the interest, which kept accumulating until it reached \$35,600, the Legislature, in 1843, passed an act, authorizing the conversion of the above loan into stock, on which a dividend of six per cent., or three per cent. on the entire State investment, should be payable. This has been regularly met; though in a few instances by bonds which have, however, since been redeemed.

In December, 1837, an agent was sent to England to negotiate a loan of \$150,000, in sums of £300 each, bearing six per cent. interest, and redeemable in 1853. Of these, 41 bonds, for £12,300, were sold in course of some time. They have since been paid by the proceeds of a new issue.

The Turnpike bridge over the Appomattox river was destroyed by a freshet, in January, 1840; but shortly afterwards rebuilt by the company.

Owing to the generally depressed state of things in 1841-2, and the bad condition of the track, the company's earnings seriously diminished, and their

affairs otherwise were reduced to a very unenviable condition. With a better track, and a return of general prosperity, their earnings have since continued steadily to advance; and though no cash dividends have yet been declared, a conviction is felt that the work is now resting on such a basis, that its owners will shortly receive a reasonable return for the long years during which nothing but Hope sustained them in their efforts at final success.

At the annual meeting in May, 1842, it was resolved to construct a branch line to Port Walthall, distant from the main line nearly three miles. This was accordingly undertaken in the following year, and executed in 1844. Since then, the company have purchased a steam-tug for towing vessels up to this point. The branch has proved probably the most productive part of the company's property, costing, with the steamer "Chesapeake," about \$40,000.

On the completion of the Chesterfield or Clover Hill road, $11\frac{1}{2}$ miles long, in 1844, a contract was made whereby it was to be operated by the R. and P. R. R. Co. We believe that, with some modification in the rates charged, this line is still run by the same parties.

An attempt was made, in May, 1846, to raise \$60,000 by loan, which failed. In 1850, the increased business of the road enabled the managers to reduce their floating debt very materially. In March, 1853, in consequence of the English bonds approaching maturity, a vigorous effort was put forth by the stockholders to raise sufficient funds to furnish the line with a new rail, and pay off the bonds then at maturity. The result was most satisfactory, \$175,000 having been taken at par by the shareholders themselves. The bonds are secured by mortgage, bear six per cent. interest, and full due in 1875.

From the proceeds of the last loan, \$43,142, which had been previously issued in scrip dividends to common stockholders, was paid. This made the total returns to date about 23 per cent.

A new loan, bearing seven per cent interest, was made in 1854. Of this, \$14,500 had been sold, at date of last report.

The entire cost of relaying track, on main line and branch road, putting up buildings, and obtaining the additional equipment requisite, amounted to about \$220,000. The rail weighs 51 lbs. per yard.

The company's general account, at the 1st of October, 1854, stood thus:

Cost of road, &c.—Richmond to Petersburg	\$909,236
Cost of road, &c.—Br. to Pt. Walthall	45,539
Debts due, and other assets on hand	35,257
	\$990,032
Capital stock—	
Subscribed by individuals	\$300,000
State—old stock	200,000
State—new "	185,600
Bonds due the State	\$33,408
Coupon Bonds of 1853	175,000
" " 1854	14,500
Bills and accounts payable	78,147
Profit and loss	144,416
	\$1,181,070

The following table shows the cost, gross and net earnings, and working expenses of this road from its opening in 1838 to the 1st of October, 1854. The returns of last year have not yet come to hand:

Year.	Cost.	Earnings from			Total.	Expenses.	Net Earnings.
		Passenger.	Freight.	Mails.			
1839	\$743,410	\$1,713	\$7,383	\$5,863	\$14,959	\$30,504	\$24,455
1840	772,916	48,144	16,755	7,243	86,289	86,104	82,095
1841	783,082	48,656	21,797	6,928	77,381	48,266	27,814
1842	789,805	40,811	29,007	6,811	66,181	43,180	22,941
1843	798,012	28,462	19,017	5,489	63,808	38,710	15,158
1844	794,401	30,655	17,205	6,411	64,208	36,689	18,514
1845	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1846	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1847	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1848	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1849	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1850	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1851	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1852	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1853	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1854	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1855	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1856	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1857	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1858	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1859	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1860	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1861	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1862	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1863	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1864	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1865	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1866	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1867	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1868	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1869	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1870	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1871	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1872	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1873	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1874	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1875	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1876	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1877	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1878	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1879	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1880	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1881	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1882	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1883	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1884	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1885	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1886	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1887	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1888	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1889	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1890	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1891	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1892	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1893	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1894	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1895	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1896	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1897	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1898	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1899	794,401	31,729	21,372	6,101	69,208	41,957	17,246
1900	794,401	31,729	21,372	6,101	69,208	41,957	17,246

Journal of Railroad Law.

CITY RAILROADS—THEIR LEGALITY.

The Philadelphia and Trenton Railroad Company are authorized by their charter to construct a railroad from their depot in Kensington District, Philadelphia, to their Depot on the corner of Third and Willow streets, along the streets of the city. Certain landowners in the city objecting to this use of the streets, the question arose as to the constitutionality of this act, allowing such a use of the public thoroughfares. In a litigation arising out of this occupation, the Supreme Court of Pennsylvania held the act constitutional. We give so much of their opinion in the case [the case of the Philadelphia and Trenton Railroad Co., 5 Wharton's R., 25,] as relates to this point.

"The remaining exception calls in question the validity of the statute which is the foundation of the proceeding, and which is said to be unconstitutional, because it impairs the obligation of contracts, by violating the chartered rights of the districts of Spring Garden and the Northern Liberties; by violating the contract under which the right of passage is assured to the inhabitants of this particular street; by taking the property of the street without compensation to the districts or individual proprietors; and by monopolizing the street in derogation of the public and private uses to which it had been applied. This, perhaps, is the substance of all these multifarious specifications.

What is the dominion of the public over such a street? In England, a highway is the property of the King as *parens patrie*, or universal trustee; in Pennsylvania, it is the property of the people, not of a particular district, but of the whole State; who, constituting as they do, the legitimate sovereign, may dispose of it by their representatives, and at their pleasure.

Highways, therefore, being universally the property of the State, are subject to its absolute di-

rection and control. An exclusive right of ferriage across a navigable stream, which is a public highway, is grantable only by it; and the navigation of the stream may be impeded or broken up by it at its pleasure. In the construction of her system of improvements, Pennsylvania has acted on this principle. Her dams across her principal rivers to feed her canals, have injured, if they have not destroyed the descending navigation by the natural channels, and this without a suspicion of want of constitutional powers. The right of passage by land or by water is a franchise which she holds in trust for all her citizens, but over which she holds despotic sway, the remedy for an abuse of it being a change of rulers, and a consequent change of the law. No person, natural or corporate, has an exclusive interest in the trust, unless she has granted it to him. Her right extends even to the soil, and though damages for special injuries to improvements have been allowed by the general road laws, nothing has been given for the use of the ground. This principle was broadly asserted in the *Commonwealth vs. Fisher*, 1 Penn., R., 666. Such being a highway as a subject of legislative authority, in what respect is a street in an incorporated town to be distinguished from it? A municipal corporation is a separate community; and hence a notion that it stands in relation to its streets as the State stands in relation to the highways of its territory. That would make it sovereign within its precincts,—a consequence not to be pretended. The owner of a town plot lays out his streets as he sees fit, or the owner of ground in an incorporated town dedicates it to the public use as a street; but it follows not that the dominion of the State is not instantly attached. The general road law extends to every incorporated town from which it is not excluded by provision of the charter; and the statute-book is full of special acts for opening, widening, altering, or vacating streets and alleys in Philadelphia and other cities. Were it not for the universality of the public sovereignty, the public lines of communication by railroads and canals might be cut off by the authority of every petty borough through which they pass; a doctrine to which Pennsylvania cannot submit, and which it would be dangerous to urge. It would be strange, therefore, were the streets of an incorporated town, not highways, subject perhaps to corporate regulation, for the purposes of grading, curbing and paving; but subject also to the paramount authority of the legislature in the regulation of their use by carriages, rail cars, or other means of locomotion yet to be invented, and this without distinction between the inhabitants and their fellow-citizens elsewhere.—The legal title to the ground remains in him who owned it before the street was laid out; but even that is an immaterial consideration; for an adverse right of soil could not impair the public right of way over of it, or prevent the legislature from modifying, abridging, or enlarging its use, whether the title were in the corporation or a stranger. I take it then that the regulation of a street is given to a corporation only for corporate purposes and subject to the paramount authority of the State in respect to its general and more extended uses, and that there would have been no invasion of chartered rights in this instance, even did either of these districts stand in a relation to the public, which would impart to its charter the qualities of compact.

What then is the interest of an individual inhabitant on a subject of compensation under the constitutional injunction that private property be not taken by a corporation for public use without it? Even agreeing that his ground extends to the middle of the street, the public have a right of way over it. Neither the part used for the street nor the part occupied by himself, is taken away from him; and as it was dedicated to the public use without restriction, he is not within the benefit of the constitutional prohibition which extends not to matters of mere annoyances. The injury of which he can complain is not direct but consequential. It consists either in an obstruction of his right of passage, which is personal; or in a depreciation of his property by decreasing the enjoyment of it; but no part of it is taken from him and acquired by the Company. The prohibition, even when it precluded a seizure of private property immediately by the State, was not largely interpreted, nor was there reason that it should be, as ample compensation was obtained from her sense of justice without it. The sufferers were overpaid, and this sort of aggression was always counted as a favor. But though she usually compensated consequential damage, it was of favor not of right. Nor did she always make such compensation. In one well known instance she destroyed a ferry by cutting off access to the shore without provision for the sufferer; and in the *Commonwealth vs. Richter* 1, Penn. R., 467, damages were unavailingly claimed from her for flooding a spring by the erection of a dam. The clause in the amended constitution which narrows the former prohibition to a taking of private property for a public use by a corporation, is to receive the same construction; the word "taking" being interpreted to mean taking the property, altogether, not a consequential injury to it which is no taking at all. For compensation of the latter, the citizen must depend on the forecast and justice of the legislature.

See on the point in this case, Vol. xxviii, AM. R. R. JOURNAL, pp. 88, 266, 690.

St. Croix and Lake Superior Railroad.

We have before us a copy of the reports of the surveys made for this line, by the company's Chief Engineer. Several new routes, it is stated, have been examined; but the old one was finally retained, with such modifications as a more thorough examination had shown to be advisable. The line has been definitely located from Superior to the crossing of St. Croix river. For convenience, it is divided into two divisions—the northern and the southern. The former commences at Lake Superior, and proceeds 50½ miles; the latter extends thence to Lake St. Croix, 85½ miles; making the entire located line 136 miles. The northern terminus is at the confluence of the St. Louis, Nemaj, and Allouez rivers, and at their common entrance into Lake Superior. The southern terminus is at Hudson, on Lake St. Croix. A direct line between these points would be 128 miles long.

The following summary shows the estimated cost of the work. Road to have a width of 17 ft. in excavating, and 15 feet on embankments, at sub grade. Narrow gauge. Bridges over large streams to be built on Howe's plan. Rails to be 60 lbs. per yard. Cross-ties, 27 inches apart, to be 6x8 inches, and 8 feet long. Chairs to be of wrought iron. Equipment to consist of 12 loco-

motives, 16 passenger, 4 baggage, and 250 other cars.

Clearing, grubbing, grading, bridging and masonry.....	\$1,002,263
Track laid and ballasted.....	1,167,224
Rolling stock.....	296,400
Machine shop and engine houses.....	30,000
Six mile turn-outs.....	60,000
Turn-tables, frogs, signs and signals..	10,000
Passenger and freight houses.....	20,000
Wood houses and water tanks.....	12,000
Engineering and superintendence.....	50,000
Incidental.....	72,112

Total cost of 136 miles road, at \$20,000 per mile.....\$2,720,000

The above differs very little from the previous estimate, except in the article of iron, which is now nearly 40 per cent. higher than when the former estimate was made. This will make a total increase of \$380,000, or \$2,820 per mile. On the northern division, the maximum grade has been reduced to 50; and on the southern to 60 ft. per mile.

The city of Superior presents another remarkable instance of the growth of Western towns.—Previous to 1854, the place was an unbroken wilderness. In the summer of that year it was laid out; and already it contains over a thousand inhabitants. Forty-three acres of land, with 2,000 feet of water front, have been donated to the company at this point. The bay contains ten square miles, and has an entrance three-fourths of a mile wide, and twelve feet deep. A very moderate expenditure will enable vessels to reach the shore, and load or unload their cargoes. Hudson, the southern terminus, is situated twenty-two miles above the confluence of the St. Croix and Mississippi, and already contains a population of 2,000.

It will be seen from the above that the route is very direct. The shortest curves have radii of not less than 2,640 feet. Timber, stone, and lime are abundant. Much of the land along the line is excellent for agricultural purposes. Other parts will furnish an immense lumbering business. The minerals, as copper and iron, are too well known, both as to the quantity and quality of the ores, to require description here. So far as healthiness of location, grandeur of scenery, and productiveness of the earth, whether on or below the surface, are concerned, this section of the United States is unsurpassed. It is estimated that the St. Croix pine-ries send annually to market 300,000,000 feet of lumber, worth \$30,000,000. For the past few years, this trade has increased in a ratio of 50 per cent. a year. Already, there are on the Mississippi about 55 steamboats regularly engaged in carrying passengers and freight to and from this section of Wisconsin. The receipts for these last year were \$1,060,000. The opening of the St. Mary's Canal, is also rapidly bringing a large commerce to Lake Superior, which will continually increase with the settling up of the country on its shores.

FINANCIAL STATEMENT.

Stock subscriptions, on which five per cent. has been paid.....	\$145,000
Right of way and depot grounds, granted by individuals and the Government..	206,000
	\$351,000
Expenditures to date.....	13,642
Balance.....	\$337,358

Gov. W. A. Barstow is President; A. T. Gray

Treasurer; E. M. Hunter, Secretary; R. Patten, Chief Engineer; and W. H. Newman, Consulting Engineer.



NOVA SCOTIA RAILWAY OFFICE.
Halifax, March 22nd, 1856.

Extension of Trunk Line to Nelson's, Shubenacadie.

TENDERS FOR GRADING, CONSTRUCTION, &c.

TENDERS will be received at this office, until SATURDAY, the 10th day of May next, at 12 o'clock, noon, for the Construction and Finish of that portion of the Railway extending from the end of Contract No. 7, to Nelson's, Shubenacadie river, on the Eastern Road leading to Truro, including road alterations—the distance being about ten miles.

The Board will furnish Rails, Chairs, Spikes and Side Keys. The work to be completed by the 30th day of June, 1857.

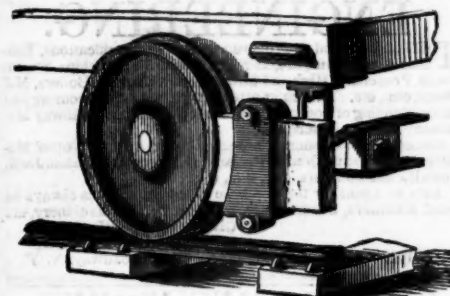
Plans, specifications and quantities may be seen on the ground, on Thursday the 1st day of May, and afterwards at the Engineer's Office.

An Engineer will attend persons desirous of Tendering, and meet them where the line crosses the Nine Mile River Road, at 10 o'clock A.M.

Tenders to be accompanied by the address of parties tendering, and the names of their Bondsmen.

JOSEPH HOWE, Chairman.

PAIGE'S ADJUSTABLE CAR BRAKE BLOCKS!



BY this improvement the brake heads or shoes are separate, removable, and adjustable blocks of hard wood scantling, clamped by a face plate or cap to suitable sockets on the ends of the brake beams. The end of the grain of the wood is presented to the wheel, and as the shoes wear, they can be set up to any required amount by loosening the face plate of the socket. The ordinary brake heads now in use must be replaced by new ones when they become a trifle worn. The present improvement obviates the necessity of this renewal, also that of shoeing the brakes with leather or iron. By using the end of the grain of the wood, a large amount of friction is had without danger of fire.

The NEW YORK ADJUSTABLE BRAKE COMPANY

are now prepared to apply this improvement on trial to cars in any part of the country, and no sales will be pressed until entire satisfaction is given.

The Brake is now in use on the HUDSON RIVER, HARLEM, BOSTON & LOWELL, and RUTLAND & BURLINGTON RAILROADS, and we invite Railroad Companies generally, through their Agents, to examine the practical working of this new and decided improvement upon all Brake Blocks now in general use.

Please address C. DINSMORE, Agent.
DINSMORE'S RAILWAY GUIDE Office, 9 Spruce st., N.Y.

New York and Erie R. R.

On and after Monday, Dec. 31st, 1855, and until further notice

PASSENGER TRAINS will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a.m., for Buffalo direct, without change of baggage or cars. At Hornellsville this Train connects with a Way Train for Dunkirk and all stations on the Western Division.

MAIL, at 8 1/4 a.m. for Dunkirk and Buffalo, and intermediate stations—Passengers by this train will remain over night at Owego, and proceed the next morning.

NEWBURGH EXPRESS, at 4 p.m., for Newburgh direct, without change of cars.

ROCKLAND PASSENGER, at 4 p.m., via Suffern's, for Piermont and intermediate stations.

WAY PASSENGER, at 4 p.m., for Otisville and intermediate stations.

NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.

EMIGRANT, at 5 p.m., for Dunkirk and Buffalo and intermediate stations.

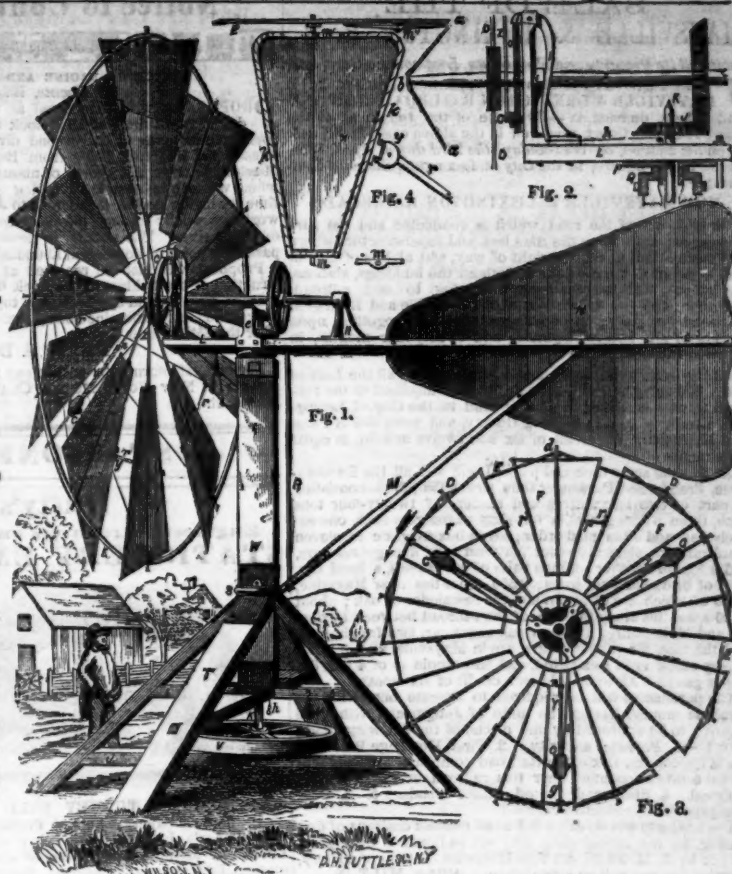
No Train will leave on Sundays.

These Express Trains connect at Elmira, with the Elmira & Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. MCCALLUM, General Sup't.

THIS MILL IS ADMIRABLY ADAPTED TO RAISING WATER AND SAWING WOOD AT RAILROAD STATIONS.—It is entirely self-regulating thus: The tension of the springs Y, keeps the sails F, turned or set to receive the power (wind), and the centrifugal force (of the weights G) whenever the velocity becomes too great, turns off the power, by turning the sails out of the wind. Unlike steam or horses, it requires no attendance, and no fuel, and sets fire to no buildings, but is always reliable when there is wind. Sufficient tank capacity is also supplied to allow for calms. Sizes of mills vary from 6 feet in diameter of wheel to 80 feet. A mill giving an average of about 5 1/2 horse power, 16 feet diameter, will cost \$200. All requisite information will be furnished on application to this office, where a model may also be seen. These mills are about being put up on the Boston & Worcester and Mobile & Ohio railroads where their operation may also be witnessed. Address or call on

N. DAVIDSON, General Agent, No. 9 Spruce st., New York.



FRANK G. JOHNSON'S
PATENT SELF-REGULATING WINDMILL,
Brooklyn, N. Y.

ELLIOTT & CO., NO. 4 WILLIAM STREET, NEW YORK.

(ONE DOOR SOUTH OF BEAVER STREET.)
RAILROAD AGENTS
AND
COMMISSION MERCHANTS,

PURCHASE AND SELL ON COMMISSION FOR RAILROAD COMPANIES.

RAILROAD IRON.—They contract upon the most favorable terms for the delivery of Rails either on board ship in England or in the United States.

LOCOMOTIVES & CARS.—Having connection with some of the best builders, they furnish the best at the lowest rates for cash or good paper.

WHEELS & AXLES.—They are Agents for two of the best Forges, and one of the first Wheel Makers, and can supply orders with promptness and to give satisfaction.

CHAIRS & SPIKES.—They are authorized to sell wrought and cast iron chairs and spikes from the best known makers at the lowest rates.

All orders will be promptly filled and at the lowest market prices.

CAR FINDINGS in variety.

Railroad Secretaries are particularly requested to forward by mail copies of their Reports from the first

ELLIOTT & CO.,
No. 4 William st., N. Y.

Notice to Contractors.



M. C. AND L. R. R. OFFICE,
Clarksville, Tenn.

THE MEMPHIS, CLARKSVILLE, & LOUISVILLE RAILROAD CO. invite sealed proposals for grading sections 1 to 30. Work generally heavy. Bridges—Cumberland, 600 feet long; Red River, 400 feet long. Materials—Earth, Rock, Loose Rock, and Hardpan. Means of the Company—Cash; Tennessee State Bonds; City and County Bonds. Time of completion—December 1st, 1857. Time of letting—April 24th, 1856. Plans, profiles, and specifications may be seen at the office.

G. B. FLEECE, Engineer in charge. W. B. MUNFORD, Pres't M. C. & L. R. R.

AN AGENT IS WANTED

to introduce in FRANCE a very valuable patented invention. For any gentleman possessing the requisite qualifications, and who can invest about \$5,000 in the business, this is an opening well worthy of attention, as a large sum may be realized in a few months. A person of experience in such business would be preferred; and a knowledge of Engineering and of Iron Manufacturing would also be a recommendation.

1814 Address—L. C. H., Post Office, New York.

Railroad Iron.

1,000 TONS 57 lbs. weight on hand and for sale by
THEODORE DEHON,
10 Wall st., near Broadway, N. Y.
March 13th, 1856. 411

Railroad Iron Wanted.

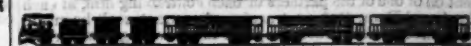
CONTRACTOR'S OFFICE MINERAL POINT RAILROAD,
No. 31 Pine street, New York.

THE subscriber desires to purchase twelve hundred tons of T rails, Erie pattern, 66 lbs. to the yard, for which proposals are invited.

St. A. WILKINS.

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE
SOUTH AND WEST.



Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington	\$15 50
do do Norfolk	8 50
From Philadelphia to Wilmington	14 00
do do Norfolk	6 50
do do Petersburg	9 00
do do Richmond	5 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati	\$13 50
do do Louisville	14 50
From Philadelphia to Cincinnati	11 00
do do Louisville	12 00
From New York to Indianapolis	16 00

An extra charge will be made for week and state rooms on board the boat.

GEORGE A. PARKER, Sup't.

SALE OF THE MAYSVILLE & LEXINGTON R. R.

with all its Property and Franchises, Locomotives, Cars, &c.
JAMES PUNNETT and others, plaintiffs, against **THE MAYSVILLE & LEXINGTON RAILROAD COMPANY** and others, defendants.—By virtue of the judgment of the Fayette Circuit Court, rendered in the above case, I will sell, at public auction, on *Wednesday, the 23rd day of April, 1886*, at the Public Square, in the City of Lexington, State of Kentucky—

THE MAYSVILLE & LEXINGTON RAILROAD;
both that part of the road which is completed and the part unfinished; embracing the road bed, and superstructure where the same is laid down, the right of way, and all lots of land in and adjacent to the road track, with all the buildings, stations, car houses, and improvements belonging to said railroad, together with the franchises of the Maysville and Lexington Railroad Company; all of which will be sold together, upon credits of six, twelve, eighteen, and twenty-four months, in equal instalments.

At the same time and place, I will also sell all the Lots of Land belonging to said Company, and not adjacent to the railroad track—consisting of a lot of land in the City of Lexington, a tract of land in Fleming County, and town lots in Paris and Millersburg, on credit of six and twelve months, in equal instalments.

And at the same time and place, I will sell all the Locomotives, Freight and Passenger Cars, Cross-Ties, &c.—consisting in part of two locomotives and tenders of twenty-four tons each, three passenger cars for sixty passengers each, one entirely new and all in good order; seven box freight cars, eleven platform cars, eleven tops for platform cars, five gravel cars, and a top for another; fifteen pairs of car wheels, a hand car, a lot of bridge and car irons; 9,500 cross-ties near Maysville, 1,380 of which are of locust and the remainder of oak; about 6,000 cross-ties along the line of the railroad between Lexington and Milensburg. The new passenger car, two freight cars, and the tops for platform cars, are in Maysville, all the other rolling stock is in Lexington, and the whole is of 4 feet 8½ inches gauge. All to be sold on a credit of six months.

The purchasers will be required to execute bonds for the purchase money, having the force of judgments, with good security, to be approved by me, of one of the following kinds, to wit:—1. Personal security. 2. First Mortgage Bonds of the Maysville and Lexington Railroad Company. 3. Mortgages in real estate in counties near this railroad or the Covington Railroad. 4. State and United States Bonds. 5. A First Mortgage on a productive railroad.

The property will be exhibited to all persons desirous of purchasing, by the undersigned, who will be found in Lexington, Ky., or by A. M. JANUARY, at Maysville. Letters of enquiry, addressed to me, will be attended to.

EBEN MILTON,
Receiver and Comptroller.
LEXINGTON, Kentucky.

2m8

Notice to Contractors.



OFFICE OF THE DEMOINE NAVIGATION AND R. R. CO.
Ottumwa, March 4th, 1886.

SEALED PROPOSALS will be received at this office until 12 o'clock M., of Monday the 28th day of April next, for the construction of twenty Locks and Dams for the improvement of the Des Moines River between the town of Alpine (12 miles below Ottumwa) and Fort Des Moines, a distance of about 1.6 miles, and also the Lock and Dam at St. Francisville, 12 miles from the Miles as per river.

The chamber of the Locks is to be 200 feet long between the quoins, and 44 feet wide. They will generally be built on rock foundations. The face of the masonry will be of hammered stone, leveled up to regular course, and laid in hydraulic cement. The backing and interior stone will be quarried in rectangular blocks, with beds parallel to each other, and joints at right angles hereto, and will be laid in quick lime mortar, except at the head of the Lock, where it will be laid in cement.

The coping will be of cut stone doweled and clamped. The gates will be in a separate tract.

The Dams will generally be about 600 feet long and 13 feet high (resting on rock) made of timber and stone, with bulkheads (with stone abutments) on each side of the river for the hydraulic canals.

The plans and specifications for the work will be ready for examination on the 15th of April, at which time copies of the specifications and blank forms for proposals, and information in regard to the locations of the Locks and Dams, will be furnished to the contractors at the several Engineers' Offices on the line, and at the Company's Office, No. 18 WILLIAM STREET, New York.

The contracts will contain a clause requiring the personal attendance of one of the partners of each contracting firm, at each Lock and Dam; that no transfer of contract shall be made, and that no subcontract except for the delivering of materials, will be allowed.

Monthly payments will be made in cash as the work progresses, reserving 15 per cent. in lieu of other security; and the whole work will be required to be completed by the 1st of January, 1888.

Contractors who are not known to the Directors, or to the Engineers, will be required to furnish satisfactory testimonials of their skill, experience, and responsibility.

The Company reserves the right to award the contracts on such proposals as may be deemed best for the interest of the State and of the Company.

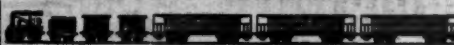
WM. C. JOHNSON, President.
EDWARD H. TRACY, Chief Eng'r.
WM. J. McALPINE, Consulting Eng'r.

802

Lord & Wright,
Counselors at Law, Cincinnati, Ohio.

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Notice to Contractors.



OFFICE OF RACINE AND MISSISSIPPI R. R. CO.
Racine, Wis., March 15th, 1886.

PROPOSALS will be received at this office until the 10th day of April next, at 12 o'clock M., for the Grading, Masonry and Bridging of the second division of the Racine and Mississippi Railroad, being from Beloit to Savanna on the Mississippi river, a distance of about sixty-eight miles. The whole work to be completed during the present year and in time for laying the track previous to January 15th, 1887. This work lies wholly through the northern counties of Illinois west of Rock river. The country is densely populated and unsurpassed in point of health and abundance of supplies.

Proposals will also be received at same time for the construction of the Bridge across Rock River at Rockton.

Plans, profiles, and specifications, together with all necessary information can be obtained on application at this office on and after the 25th instant.

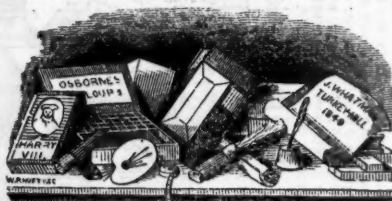
HENRY S. DURAND, President.

For general information parties can refer to the Company's Agents in New York, Messrs. CLARK & JESUP, No. 70 Beaver st.

STATIONERY.

Huffy's

Engineers, Architects and Draftsmen's
STATIONERY EMPORIUM.



WHATMAN'S TURKEY MILL DRAWING PAPER, Tracing paper, Plan and Profile, Protractors, Drawing Pins, Faber's Jackson's and other makers' Pencils; Field, Level, and Memorandum Books of various patterns; Mathematical Instruments, Tape-lines, Mouth Glue, Cross Section paper, Triangles Label Brushes, Gum Bands, Maiden Gum, Red Tape, Ink, Inkstands and sand, Water Colors, Palettes, Patent Binders for letters, Portfolios, etc., together with a general assortment of Stationery and Blank Books.

All goods packed with care, and forwarded to any part of the United States.

May 15, 1884.

JOSEPH HUFFY,
Successor to H. L. Lipman,
179 Chestnut St., Philadelphia.

BUSINESS CARDS.

H. M. SMYTH,
COMMISSION MERCHANT

AND
MANUFACTURERS' AGENT,
No. 13 Doane St., BOSTON.

American and Foreign bar, boiler, and pig iron, Tyres, Axles, wrought iron Wheels, boiler, water and gas Tubes, iron and steel Wire, boiler and tank Rivets, Steel, Files, Emery, &c.

Rollins & Haviland,

STOCK BROKERS,

38 Exchange Place NEW YORK.

JOHN T. ROLLINS.

WALTER HAVILAND.

**London Agency for Sale of
Bonds, &c.**

MESSRS. LANCE & CO. are making more generally known in England, the great advantages of American Securities for investment.

During the present year Messrs. Lance & Co. have disposed of a large amount of American and Canadian Railway Bonds, and are fast extending their connection, they will be happy to correspond with parties having good American Securities for sale.

Messrs. LANCE & CO. have had experience in the purchase and shipment of iron, and offer their co-operation to those about to negotiate for the disposal of bonds and the purchase of rails. P. S.—Presidents of railway companies are requested to favor Messrs. L. & Co. with Exhibits or Reports of their companies as published.

LONDON, Oct. 1885.

10 Regent st., WATERLOO PLACE.

6m46

Meigs & Greenleaf,

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